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TABLE OF CONTENTS

Editorials:

The Philadelphia Convention *R. A. Kent, E. J. Chave, V. E. Marriott* 274

Difficulties for Religion in an Age of Science
 *Robert A. Falconer and James B. Pratt* 278

Basic Assumptions of Science in Their Bearing upon Religion
 *D. W. Morehouse and F. S. C. Northrop* 289

Basic Assumptions of Religion in Their Bearing upon Science
 *James H. Leuba and William Adams Brown* 297

Nature of Science and of Religion and Their Interrelation
 *Gerald B. Smith and Edwin E. Aubrey* 304

Necessary Changes in Scientific and Religious Attitudes and Conceptions
 *Solomon Goldman and Mark A. May* 315

Necessary Changes in Religious Education
 *Hugh Hartshorne, Sophia Lyon Fahs, A. Duncan Yokum* 327

A New Science and a New Religion *Rufus M. Jones* 344

The Progress of Thinking in the Convention *Harrison S. Elliott* 346

Research Day in the Convention:

Legitimate Fields for Research *Arthur E. Holt* 357

Reports on Research in Progress *Julius B. Maller, Ernest
 J. Chave, A. T. Boisen, Samuel C. Kincheloe, George W. Beiswanger* 361

Research Projects in Religious Education *Ruth Shonle Cavan* 376

Business Session of the Philadelphia Convention 387

By-Laws of the Religious Education Association 389

The Professional Groups Reorganize 392

Coe's Criticism of the Wrestle of Religion *Henry N. Wieman* 395

EDITORIALS

THE PHILADELPHIA CONVENTION

TO ONE viewing the Philadelphia convention from the perspective of a two weeks range, certain features stand out significantly.

1. The sessions were, to a striking degree, dominated by a spirit of tolerance. Such a condition would be expected at a gathering of scientists, but for it to prevail so consistently where religious beliefs and practices were main issues, was so unusual as to deserve inquiry into its significance. It would seem to mean, in the first place, that the possibility of co-operative discussion of common issues among adherents of divergent religious denominations is not only a possibility but a partial realization. In the second place, this occurred for and in the name of the religious training of children and youth. There is apparently real ground, therefore, for hoping that the religious education movement is coming to be thought of above elements that contribute toward religious cleavage. In the third place, a larger objective of religious education has been distinctly served in a meeting of this character—"to promote understanding, appreciation and fellowship" and to use them in the great problem common to all. Brief quotations from a recent editorial in the *Christian Century* are applicable here:

"There is a type of mind that can never understand the difference between conference and compromise; between meeting one's fellowmen on the plane of human equality and fellowship, and the admission that all beliefs are equally true." "The man, or the presbytery, or the pope, who cannot hold his own faith with a full confidence of its truth, and at the same time meet with the adherents of other faiths on a common plane for fellowship and conference and mutual understanding, must have some lurking doubt as to the ability of his own religion to hold its own in a fair field, or else he fails to see that people may differ amicably and yet be mutually appreciative of one another's virtues and values."

One of the factors that contributed significantly to the attitude of tolerance was the nature of the main addresses before the convention. The speakers dealt with issues which, though controversial in character, were not so because of denominational implications. The clarity with which, for example, Mr. Northrop presented fundamental issues concerning the historical derivations of conceptions of the unity of the universe, was a challenge to the intelligence of every listener and at the same time a searchlight upon his prejudices.

2. The informal discussions were somewhat of an experiment and should be judged in that light. As is true of most experiments, the evaluation accorded this one varies according to the individual judgment of the respondent. To some the time thus spent seemed largely wasted. Little, if anything, new was developed and the occasion as interpreted by them mainly gave opportunity for some who like to be heard for their much speaking. One is reminded of Macaulay's remark that writing makes one careful and speaking makes one ready.

It is obvious that there is distinct danger of mistaking volubility for thinking. While there is a correlation between ability to think and ability to express one's thoughts, readiness of words is no guarantee of mental vigor or accuracy. In our judgment it was fortunate that no discussion followed the addresses of the first evening. Each of these was of such a nature that impromptu mass handling of them would in all probability have badly scrambled them. What they eminently deserved was careful, individual examination in the dignified settings in which the speakers left them.

The above is not a condemnation of the method of discussion used at Philadelphia. It is only one side of the case. There is clearly another side. To talk

over intelligently the problem in one's mind helps one to clarify his thinking upon them. Undoubtedly more points of view—side lights—are added by such discussion. However thorough the speaker, his is only one point of view. Furthermore, human nature being what it is, it is true that opportunity to participate in discussion adds to the genuine satisfaction of many who attend.

How much is added to the strength of a convention by submitting questions of theory and belief to such procedure will doubtless remain a mooted point. But surely there can be no serious question of the need for this method in handling reports of investigation, experimentation, and field practice. The convention session should probably add to this portion of its program, even if it involves cutting down the other.

3. An attempt to evaluate the whole convention in terms of the present meaning of religious education leaves us with an overwhelming conviction that the Religious Education Association may well keep clearly in mind what it should be striving for. Formal education of any sort involves children and youth far more than it does adults. The failure to recognize the significance of this fact has been a major defect of the Protestant church. The failure of Protestant churches to incorporate this fact into their plans constitutes perhaps the greatest single handicap to the present progress of religious education.

The Religious Education Association stands in danger of committing an analogous error. It will clearly do so if it over emphasizes the beliefs and mental processes of the adult and under emphasizes the real problems of the religious education of children and youth. It is well to discuss religion in an age of science. We question whether it is well to give a large share of the attention to issues that only indirectly or remotely attach to the main issue. This is not stated

as a criticism of the last convention but rather as an index finger for the future. The church and the Religious Education Association stand in real danger of having their function in this field taken over by secular agencies and organizations promoting character education. If religion has no distinct contribution to make to character education, then there is no clear reason why such outside agencies should not supersede the church in this field. But even if religion has a contribution and the agencies administering it fail to fix their major attention upon the proper character training of children and youth, this will constitute another ground for transferring the responsibility for character education to secular organizations, and the transfer will be merited.

R. A. Kent, Northwestern University.

LARGE appreciation is due the General Secretary and his staff of workers who planned and carried through the Philadelphia convention. Even with the big general away sick there was not a hitch. The convention dealt with big problems, big enough to challenge and secure careful thinking, and it had a strong leading-on tendency. Everyone who attended wants more of this fearless facing of problems. There is a lot of heavy clearing to be done before desired crops can be raised. Some of the old standing timber has deep roots and it will require hard work to put the land into shape for new products. The Philadelphia meeting was worthwhile, *but* what is to follow it?

The convention revealed very plainly a distinctly growing and significant tendency that should be carefully noted. Most of the speakers were men from departments not ordinarily marked religious education. The outgoing president is a distinguished educationalist, but his particular field is not religious education. The newly elected president is a well known and highly respected religionist, but his department and most of his

writings are in the field called systematic theology. The new chairman of the Editorial Committee is an internationally known scholar in the same field. Not many names on the Board of Directors are those of persons whose profession it is to teach or share in the processes usually labelled religious education. One cannot escape the fact that religious education has entered a new day. There is a new interest in it and a broadened conception of it. What does it mean for the future of religious education? Are we close enough to the task to understand it?

Throughout the convention there was keen discussion, but a discussion of religion without men losing their religion. One chairman suggested that perhaps there was not another religious organization in America, or in the world, where such free interchange of ideas and opinions could be given without bitter controversy and open warfare ensuing. Neither the conflict between science and religion, nor any conflict between the exponents of varied theories, was of a kind that warranted the press sending out war news from this convention. It was most stimulating and encouraging to see Jewish, Roman Catholic, and Protestant religious leaders on the same platform discussing common problems in a constructive way.

Difficulties for religion in an age of science were clearly stated. There was no hedging. The realms of science and religion were sufficiently separated to show that there was no necessity for young or old having to choose between science and religion for a philosophy of life. Yet so many negatives were expressed against old forms, beliefs, and practices of religion, that at times it almost seemed as if the actual workers in the field of religious education had no religion left to take back to their tasks. Only one person, and that a woman, was on the program to tell what experiments were under way to carry forward re-

ligious education and be consistent with the facts and methods presented by science.

It is easy to criticize, to theorize, to philosophize, to paralyze articulation, but it is another tremendous task and responsibility to assume a satisfactory working hypothesis and to go ahead with the religious education of boys and girls, young people and adults. But this generation needs religious education—even if all the problems of religion and science have not been settled. This convention was determined to be scientific, but it must not be forgotten that scientific investigations proceed more satisfactorily after a working hypothesis has been attained. Some wondered what working hypothesis this convention helped to promote for persons who must keep on with the responsibilities of religious education. Discussions may exhaust people and interests without modifying actual procedure. What is to follow the discussions we shared?

Apparently there is need for leaders from other fields than that of the specific profession of religious education to come in and share the responsibilities for determining what shall be the working hypotheses for the new moves in this field. All interests are bound together. Scientists of every kind must continue their exact researches, but they should also feel it their duty to help boys and girls, young people, and older folk to find a satisfactory faith by which to live. Religious dynamic is needed today more than ever if, in spite of the increasing complexities of life, we are to build a better world and give every individual a decent chance to realize his best self in it. Will the broadening interests in religious education give new vision and new support to the gigantic tasks of changing people and changing a world?

Will future conventions contribute most by the method of mass discussions or is there a better way? Can we have some mass meetings for general informa-

tion, education, and inspiration? Can we have more small groups who are working on specific problems and have common interests and a desire for closer fellowship and cooperation in these pursuits? Those who come from the actual jobs want to go back more ready for the next step and with some assurance that they are working in the right direction. Conventions seem ordinarily to be conducted with too large a waste and with a minimum of needed results. What can be done to improve the situation?

E. J. Chave, University of Chicago.

PROFESSOR Bacon of Yale Divinity School, when discussing with his classes certain theological difficulties, used to say, "The way out, gentlemen, is not back, but through." That phrase represents rather accurately the temper of the Philadelphia convention. There were voices which counselled going back but they were as voices crying in the night. The great majority of the delegates were convinced that the only way out was to plough through, following the best leads available and letting the furrows fall where fall they must.

The conviction forced home upon most of us at this convention, was that to teach religion in this age of science, we must accept the scientific method as our guide. This does not mean the acceptance of all scientific hypotheses or "facts." Because of the success of the natural sciences in securing certain practical results, the sciences have acquired a great and somewhat spurious authority, so that men have come to accept certain theories of scientists with little or no confirmation. Thus there has grown up what has rather aptly been called "scientific folklore." Some of these theories are shouted from the house tops as if they were confirmed by the universe and as unchangeable as laws of the Medes and the Persians. There were some instances of this type of dogmatism on the floor of the conven-

tion, but here again the main tide of thought represented at Philadelphia had swept by this scientific dogmatism as it had previously swept by theological dogmatism.

There were for me several high lights in the convention. One was when Professor F. S. C. Northrop of Yale painted for us with swift and telling strokes the development of thought from the time of Plato and Aristotle down to Einstein, and told how the latest discoveries in physics seemed to indicate that there were not merely "things" in the universe, but also "order," "structure." Another high point was when Professor Rufus M. Jones suggested that when these ghostly emanations came out of the atom they had already been at school in mathematics. Here we had the scientist and the mystic philosopher both coming out at the same place. Both of these speakers opened up new and fascinating vistas of thought development and hinted that the time is ripe for a new synthesis of our scattered departments of knowledge.

The most practical demonstration of the new method in its actual use with young people was given by Mrs. Sophia Lyon Fahs of the Union School of Religion. She claimed that we must so teach our children that they may unlearn anything we have taught them without emotional upset; only so can we fit them for changing civilization. She described in beautiful fashion the quest for God as carried on with boys and girls in a school where the new method is in vogue. At only two points in the whole convention would I have been moved to prayer, once when Mrs. Fahs was telling of her work with children and the other when Dr. Jones demonstrated that "the rainbow was not squashed."

Those who planned the program evidently intended that it should move along steadily toward a climax, reaching its conclusion on Thursday in the topic, "Necessary Changes in Religious Educa-

tion." It did not so move. The discussions suffered the same vicissitudes that all open floor discussions suffer in all conventions. There are always a few people who are not of "the same universe of discourse," who waste the time of the convention in irrelevant questions and lengthy harangues. They not only waste time, but they break up the spirit and tempo of the discussion. But after all there were fewer irrelevancies than occur on the floor of our National Congress, if that is any consolation. Probably it was too much to ask that the discussions of so large and complicated a theme should be carried grandly on to definite conclusions. And if we are consistent in our adherence to the principle of process education, we should not expect it. But those who had ears to hear could detect an undercurrent of thinking which dares

to accept life as a quest and faces the world with an open mind.

Personally, I could have wished that more attention could have been given to the aspect of the problem which Mrs. Fahs emphasized, that is, the emotional aspect. It is now recognized that our intellect is but "a speck riding on a sea of emotion." Any who deal with children must discover the tremendous importance of the emotional factor. This merited more attention in the convention.

It would have suited me better also if there could have been more time given to actual examples of creative teaching rather than so much thrashing over of abstract theories.

But, all in all, it was for me the best R. E. A. convention that in my brief experience I have attended.

Victor E. Marriott, The Congregational Conference of Illinois.

DIFFICULTIES FOR RELIGION IN AN AGE OF SCIENCE*

I

ADDRESS OF SIR ROBERT A. FALCONER*

THE QUESTION has been put forward for our consideration at the opening meeting of our conference, Why is religion in difficulty in a scientific age? Of course this is met at once by another question, Is it especially so? Do the well educated people who have been shaped and moulded by the spirit of science find it more difficult to live a religious life in 1928 than did those of the pre-war period? I see no reason for affirming that they do. And I am glad that my opinion is confirmed by that of the eminent philosopher and lawyer, Lord Haldane, once Lord Chancellor of England. He wrote recently: "To what is basic and loftiest in the doctrine of Christ there is today little opposition on the part of either science or philosophy. Their prob-

lems have been distinguished from those with which the churches are concerned, and there reigns, on the whole, no longer the confusion of ideas that gave rise to apparent contradiction." . . . "There may be great divergence of belief about the gospel narrative. But there is none about the presence of God in the soul, or about the tremendous significance of the teaching of Christ. It is to the highest types of mind that these things appeal most keenly and become most real. Not of course to all, but to a larger proportion than is popularly believed."¹ In fact it may be said with a measure of truth that the warfare between science and religion should be almost out of date. Like the War of 1812-14 between America and Britain, it would never have been fought had the combatants been less full

*Presidential address at the annual convention of the Religious Education Association.

1. Haldane, *Hibbert Journal*, Jan., 1928, p. 204.

of prejudice and understood each other better. Both spiritual and scientific diplomacy were poor. The leaders who were engaged in it did not speak one another's language, and took long, perhaps wilfully long, to grasp one another's ideas.

The acuteness of the difficulty between science and religion varies with local conditions. It is not permissible to generalize for the whole of the United States, Canada, England, and Scotland; nor to say that conditions in Tennessee are typical of the Anglo-Saxon world. Storms are traced by meteorologists as they pass over oceans, across prairies, by mountain ranges, and they prove often more destructive in distant regions than in the centre where they took their rise. So it is with the agitations of human thought. Movement causes revolution in its course, but there may be comparative calm at the source long before the greatest disturbance is recorded far away. The conflict between science and religion does not seem to be as acute in the older universities of the English speaking world as it was a generation ago. But there is an almost cyclonic turmoil in certain sections of this continent, and winds of controversy blow hard through some state universities and colleges, and batter about students who in the struggle cast off bit by bit their home beliefs and practices.

Among the groups of traditional Protestantism on this continent the scientific spirit is more disturbing than anywhere else, and this in spite of the fact that the Protestant should adjust himself more easily to it than the Catholic. By her system of education the Church of Rome has been able to give more effective protection to her people against the invasion of hostile thought. There are indeed Protestants who abide with placidity within their fortress of authority; but many are distressed to find that democratic freedom of thought has been undermining the old fortress, and they are worried by constant explosions. As for

the youth who go out into the intellectual world, many of them are lost to their original faith.

But genuine Protestantism must face this scientific spirit, and discover for itself, as it has done elsewhere, that it is not an evil spirit to be dreaded. Ever since the great breach in the sixteenth century the reforming branch of the Church has professed to establish democracy upon the right of private judgment as one of its corner stones. This claim has never been fully justified, but as democracy is becoming more pervaded by the scientific spirit it will force Protestantism back upon its first principles. In its present condition it is no safer than were the United States when Lincoln said that "a house divided against itself cannot stand. I believe this government cannot endure half slave and half free."

It must be admitted that the multiform varieties of religion cause the average student much difficulty. He has been acquiring the habit of criticism, and he asks questions about these varieties of religion which the psychologist often answers in a way disconcerting to the beliefs that he brought from his home. On the one hand he discovers men of acute and able mind, of the highest philosophical and scientific attainment, who are most devout in their observance of forms of religious worship which to others seem magical or superstitious. If such cases were few or sporadic they might be put down as "sports," but there have been too many through history, and there are too many today, for the thoughtful student to ignore the testimony of such men. They claim that they know the difference between appearance and reality, between "substance" and "accident." They use sacraments and symbols and dogmas and forms of language by which the life of the soul is clarified and is brought into greater fulness.

Such ornate and sacramental worship is repudiated as idolatrous by many others, and often the most vehement of

these are persons of narrow intelligence and shallow feeling. But the simpler forms of Protestantism do appeal to a very large number of the most intelligent members of our communities. In the minds of these thoughtful persons the confusion arising from the varieties of present day religion might be abated were it not for the dust and fury which now, as for centuries, envelop the warring churches and sects. What truth is there in the hymn, "We are not divided, all one body we"? This phenomenon, of course, is not due to the pervasiveness of science; it is lamentably ancient. But the disintegration of dogma, and a general spirit of toleration on the part of the community in general, predispose the average student, who is generous and not deeply religious, to accept the view, which is put forward by some psychologists as the result of science, that these bitter controversies on religion are due to emotional credulity based upon auto-suggestion, that magical or mystical beliefs have been the concomitants of nearly all religious experience, and that the newer knowledge "does away with the God and the method of the religions."

It is therefore necessary for the average thoughtful person to discern how much in these contrasting forms of religion is essential and how much is mere adventitious accompaniment. But this is no easy matter. Heed should be given to these words of Höfding: "The religious consciousness is always inclined to drag about with it traditions which have neither religious, intellectual, nor ethical significance, dead values which no human being can really experience, but which it does not dare to throw away, lest in their fall they should tear away something more with them."²

It is therefore of the first importance in religious education that the churches should not send their youth out into the scientific world with too heavy a burden

of these "dead values." For it must be assumed that though they bring from their homes good moral character and a measure of religious sentiment, they have had no strong religious experience. In conduct and worship they will for a time continue to do what is expected of them by their family. But having had few intuitions of such mystical quality as to form a core of conviction, and being in the process of working their religious beliefs into character, they must be helped to adjust their ideas to science and philosophy if possible without wrecking their faith. If they can buttress their religion by a theistic view of the world and philosophy of life their faith will be steadied and strengthened.

Some of us can remember the serious readjustments that we had to undergo more than a generation ago. Many a young man who was beginning to think for himself embraced views that were not "sound." A fresh atmosphere of scientific investigation prevailed in the classrooms, and the professors who impressed us most in respect of religion held a creed that was very different from that of our earlier environment. Historical criticism was being applied to the Bible and therefore to the doctrines based upon it, and soon the whole intellectual view of religion was illuminated and we were eased of heavy burdens. Fortunate those of us were who went through this process in early maturity under men of learning and faith, who guided us in a path that was fairly free of stumbling blocks.

Another difficulty is created for religion in the educated mind of today by the brilliance of scientific discovery. No word is more distinctive of the present era. It has been a period of such unexampled confidence as even to surpass in the adventure of man's spirit the Renaissance of the sixteenth century. Universities have been transformed by the application of scientific method. The natural sciences are given

2. *Philosophy of Religion*, p. 180.

the place of primacy; when psychology in the name of science makes wide claims, philosophy, that ancient mistress, is almost put on her defense; as for the humanities they need apologists; theology appears to many as an antique. Consequently the young generation, who have been so completely exposed to the atmosphere of science, and who breathe the optimism of discovery, have unconsciously assumed, in an uncritical frame of mind, that her methods and results are universally valid.

The magnificence of scientific discovery has made it much harder for many persons to believe in the position of supremacy assigned to man in the Christian view of the universe. The unearthing of the story of the human race, the millions of years during which at various stages man may possibly have been on the globe, the vastness of the heavens, the multitude of worlds have heightened the insignificance of the individual. Is it not too great a demand on modern intelligence to ask our acceptance of the faith of Jesus: "Are not five sparrows sold for two pence? and not one of them is forgotten in the sight of God. But the very hairs of your head are all numbered. Fear not; ye are of more value than many sparrows?"

But why is this faith too great a demand on modern intelligence? Has it enthroned self-existent law in the stead of a wise and omnipotent Father? Remember, the difficulty did not arise with the twentieth century. The noblest of Israel's prophets asked: "Who hath measured the waters in the hollow of his hand, and meted out heaven with the span, and comprehended the dust of the earth in a measure, and weighed the mountains in scales, and the hills in a balance?" Why was that a question less difficult for the Hebrew to answer in his world than for us in ours? Jehovah put the same question to Job out of the whirlwind: "Where wast thou when I laid the foundations of the earth? Declare, if thou hast under-

standing. . . . Canst thou bind the cluster of the Pleiades, or loose the bands of Orion?"

Nowhere in modern literature has this contrast been more nobly drawn than by Pascal: "Let man contemplate the whole realm of nature in its full and exalted majesty, and turn his eyes from the low objects which hem him round; let him observe that brilliant light set like an eternal lamp to illumine the universe, let the earth appear to him a point in comparison with the vast circle described by that sun, and let him see with amazement that even this vast circle is itself but a fine point in regard to that described by the stars revolving in the firmament. If our view be arrested there, let imagination pass beyond, and it will sooner exhaust the power of thinking than nature that of giving scope for thought. The whole visible world is but an imperceptible speck in the ample bosom of nature. It is, in short, the greatest sensible mark of the almighty power of God, in that thought let imagination lose itself. . . . Then returning to himself, let man consider his own being compared with all that is; let him regard himself as wandering in this remote province of nature; and from the little dungeon in which he finds himself lodged, I mean the universe, let him learn to set a true value on the earth, on its kingdoms, its cities and on himself." Who will say that our problem today is any harder than it was when expressed in these words by one of the greatest scientists of all time?

Quite apart from the direct influence of the scientific training in the universities upon thoughtful students, there is also the indirect result upon the popular mind of scientific hypotheses and methods which are the most active constituent element in the "intellectual climate" of today. These the modern man breathes into his system, as his father absorbed other theories, dogmas and methods from his circumambient medium of thought. During the mediaeval period a great con-

structive philosophy engaged the attention of the ablest minds, and filtered down into the average; today science reigns in its stead. This enveloping "climate" does not however exercise a more enervating influence upon religion than those which have prevailed at other periods in western civilization, as for example in the later seventeenth and eighteenth centuries.

But religion does not need a tonic today. And probably the chief danger to it at present lies in the subtlety of the influence of popular science. The average man exercises no peculiarly independent powers of thought. Neither student nor merchant gives much effort to solving abstract problems. Each accepts opinions from his environment and rivets his eye upon this world. In the midst of astounding material accomplishments due to the applications of science, he asks of it no questions as to the ultimate origin of things. For him nothing succeeds like success, and his materially successful world is too much with him to allow his mind leisure to ponder imponderables.

For such an one to be asked to take account of the supernatural is to be brought up against the forbiddingly mysterious. Once miracles were a popular verification of religious reality; but to talk today to the average man about them is to invite skepticism. Even apologists discover them to be serious obstacles to the faith which require explanation, for ordinary men are aware that it is an axiom of science that "What would formerly have been regarded as a miracle is, for the modern man, not a case of breach of order, but an occasion for extending his knowledge of it."

Having now reviewed, as best we might, the present situation, we may attempt to consider what practices those who profess the scientific attitude are questioning the value of or are abandoning. Generally it may be said that they are those forms of worship in which stress is laid upon the miraculous element

in religion. Some scientific minds, as we have seen, do continue to satisfy their religious nature with highly elaborate ceremonies, which visualize for them the supernatural; but they are, as a rule, men of strong religious faith, who can differentiate between scientific theory and religious truth, and who delight in the symbolic.

The average product of the "scientific climate" often deserts the church services, because his mind has grown unfamiliar with the idea of the supernatural. Not only has he been absorbing purely secular theories, but he has been limiting his activities to an area bounded by his visible horizon. Within this familiar paddock he has exercised his unimaginative faculties, and has not felt the appeal to allow his spirit to roam over the invigorating uplands of the supernatural.

Of course much present day religious worship does not invite him into such wide and serene spaces. A large share of the conduct of worship in Protestant churches is handed over to the preacher, whose task is heavier than before, partly because some of his hearers may be more highly educated and intelligent than himself. If a man of average mental equipment, though probably of fine character, dilutes his spiritual idealism by his own views on the world order, the teachings of science, economic theory or social practice, which may be commonplace or questionable, he is met by very critical listeners. They are irritated by opinions thus obtruded upon them. If therefore the preacher is to retain the respect of the intelligent portion of his congregation, he must be able to differentiate between his own scientific or economic opinions and his religious message, relegating the former to the sphere of things in which liberty of judgment is to be allowed.

To sum up:

1. Intelligent persons interested in religion should be instant in season and out of season to require of those who educate

our youth that they shall carefully define the limitations of science. Its function is to observe truthfully and completely and then to describe accurately and to keep its hypotheses within facts. Constant appeal must be made from the popular dogmatists of science to the Caesars of science. Mere creedal hypotheses masking under the name of science must be challenged. As such they are more dangerous to the human spirit than theological creeds. Some psychological descriptions of religious experience are so inaccurate and misleading that their propagators deserve to be called pseudo-scientists. They and we do not mean the same thing.

That knowledge which comes through the observation and analysis of the data of physical nature only pushes the shroud of mystery a little further back from the face of nature. Not long since I stood in the laboratory of an eminent physicist. He was explaining to me by a model the most recent theory of atomic structure, and outlined his hypothesis that the appearance of certain green lines in the spectrum of the aurora was due to the "jump" of an electron from one supposed orbit to another. I asked him, "Why did the electron 'jump'?" "There," said he, "you have asked an ultimate question; our hypothesis is only a deduction from certain visible facts." Natural science takes external nature as it finds it; it seeks to reduce it to order by discovering and expressing its habit of working, but as a great mathematician says, "Science is independent of any opinions which may be held as to a reality behind phenomena. . . . If no philosophical assumptions are made which lie outside the necessities of Natural Science, the position of Natural Science in relation to theism . . . is one of neutrality or independence."³

2. We must further affirm that if the human spirit is to thrive, other kinds of knowledge are essential for its nutriment.

By philosophy and literature we learn truth concerning man's nature, without which we should be castaways on a desert island in an ocean of mystery. The neglect of human studies is at present the weakest part of our higher education. They should be a tonic in our intellectual atmosphere to modify the realism of the prevalent "scientific climate." Philosophers and poets have as much right to proclaim their truth about the mind of man as scientists theirs about his body. Indeed our society is based upon this axiom. We must assume that the soul of man within is as intelligible to his spirit as is the universe without. Because the philosopher and the poet use different methods and different material from the scientist, their construction of human life is no less reliable than his.

3. We must educate our youth in respect of religious values. In some sense this means that we must widen the scope of humanism. Noble though man is by reason of his intelligence, he is equally noble by reason of his capacity for love, for deciding for the right as against the wrong, and for acting as duty bids him. If our very finite and fragmentary intelligence enables us to make truthful explorations into the visible universe, and we become more truly great as we realize our insignificance, shall not our love, fitful and feverish though it be, reach out in its purest act to a steady and health-giving reality beyond us? Why trust our intelligence alone? Is it the only quality of our being? Take away love and human nature with all its intelligence falls into ruins. Love is the prophet within the soul of man and foretells its immortality. By love "we see mortal things through immortal eyes." Quite as regal as intelligence or as essential love is the conscience from which issue the judgments as to right or wrong.

"Stern daughter of the voice of God Who
From vain temptations dost set free
And calmest the weary strife of frail
humanity."

Who can affirm with reason that theism

3. E. W. Hobson, *The Domain of Natural Science*, p. 469.

based upon these values of the human spirit is a truthful assumption? It gives these values the stamp that validates their claim. We need purer religion and finer humanism along with the loftiest constructions that science can make of the physical world to bring harmony into man's mind. There is a universe of religious and moral values as compelling as that of the heavens into which the astronomer guides us. The spell cast upon

mankind by Isaiah, Jesus, Paul, Augustine, Pascal—to mention only our own faith—is proof of that. Therefore the teacher of religion must allow these values to make their appeal to the nature of those whom he is endeavoring to educate. He must not attempt to float their spiritual life upon the troubled seas of modern thought by philosophies, dogmas, or worn out scientific theories which have lost their buoyancy. Otherwise, religion itself may hardly come safe to shore.

II

ADDRESS OF PROFESSOR JAMES B. PRATT*

I HAVE been asked to present as forcibly as I can some of the difficulties which liberal religion has to face in an age of science: in other words to act as a kind of *Advocatus Diaboli*. One of the most obvious of these difficulties is, of course, the fact of the complete loss of the possibility of appeal to authority. The authority of the Bible has gone to the winds, the authority of the church, the authority of dogma and creed. In short, there is nothing more left to us, at least to us liberals, as a specific and definite revelation.

Of course, we have revelation, we liberals feel that God has revealed himself everywhere,—we make more of revelation than the fundamentalists do. God has revealed himself not only in the Bible, but in the Koran, in the Upanishads, in all sorts of good poetry, all sorts of bad poetry, in music, Beethoven, jazz, day and night, life and death. Everywhere, God has revealed himself. But a revelation which is everywhere and about everything is about nothing in particular, and therefore there is no specific revelation that we liberals can possibly appeal to. For us at least, the strife is over. It was over long ago.

In that connection it is rather interesting to look back thirty years or so, back

into the nineties, the days when that struggle over authority was at its height, the good old days when we, as a young people were reading Lyman Abbott and the Outlook. Many of you will remember the situation, and you will recall, as I do, the tremendous enthusiasm and optimism with which we liberals hailed the signs of the times. The loss of authority was to be no loss whatever to the strength of religion; in fact, religious belief was to be greatly strengthened by giving up this old and rotten prop, and there was to be no difficulty involved at all.

Well, our hopes were rosier than their fulfillment. As we look about us today, I think that we have to admit to ourselves that the loss of belief in the old fashioned authority, inevitable though it was, has had the unfortunate result of reducing by a good deal the strength of belief in a great many people, and producing a large amount of indifference. Tell it not in Gath, whisper it not in the streets of Kentucky, but we liberals, I think, must admit in that particular point we guessed wrong.

To come to natural science and to deal with it as briefly as I may, the one great conclusion to which natural science has brought us all, I suppose, is the universality of natural law. Natural law has no

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exception. There are no gaps in it to be filled by supernatural intervention. I do not need to stress this, it is nothing new; it is something we have heard from the pulpits and read from the pens of liberal preachers and writers for a good many years with so much enthusiasm that, in fact, we have scarcely stopped to ask ourselves just what is involved in it.

One of the things that is involved is the complete loss of the belief in divine providence. If you believe that law, natural law, is absolute and universal, you do not believe that God ever interferes. Now that marks our day as a rather revolutionary epoch. Throughout all the Christian centuries, throughout all the Jewish centuries that preceded the Christian centuries, our predecessors in the faith have believed strenuously in divine providence. It has been one of the most fundamental things in the Christian faith and the Christian life. That faith is now a thing of the past.

Another thing that has gone in the same way (at least if we are going to be consistent) is the belief in the efficacy of petitional prayer. This is an important consideration. I suppose one might say that about half of religion consists in prayer and about nine-tenths of the actual prayers are petitional. It is probable, to be sure, that we could dispense with nine-tenths of those nine-tenths without any great loss; and if somehow or other the long prayer could be deleted from our church services, I for one should consider it so miraculous a blessing as almost to argue the intervention of divine providence. None the less, it is something to be remarked as of very great significance, that the chief function of worship, as we might almost call prayer, has been so largely transformed, at least in the beliefs of liberal Christians.

Of course, the more deeply religious souls (and that means a good many, I am sure) will not feel any really great loss

from giving up petitional prayer, because they will find in the prayer of meditation and communion the thing which is of real importance. They will find God in their own hearts. But I do not think we can let the matter simply drop here. The psychologists claim to have a good deal to say about it. They insist that here, as elsewhere, universal law reigns supreme, that nothing happens by chance, that there are no holes to be filled in by the supernatural or anything of that sort, that psychology is a science, and that if it is a science, it must be able to give a complete account of everything that happens in the life of the mind. I do not know how you feel about it, but that at least is the claim of the great majority of psychologists. Of course, it may be the voice of God in our hearts that we hear, but the psychologists assure us that they no longer have any need of that hypothesis.

So much for natural science. Now a word about one of the great influences and products of natural science in its relation to religion. I refer to naturalism. Naturalism is not a science, much as the naturalists would like to have us believe it is. Naturalism is a particular brand of philosophy, which likes to dress up in the clothes of science. It is none the less a kind of philosophy which it was inevitable should develop in a scientific age like ours.

Long ago science actually got hold of all the inorganic world, and the claim of the naturalists is, of course, that the world of life not only is a world of law, as Darwin said, and as the biologists have long admitted, but that it is a world which is ultimately reducible to purely mechanical explanation, to purely mechanistic forces. In that, of course, it differs from the older biology; it differs from biology as a science. That is a claim, let me repeat, which is not scientific, it is philosophical; but it is one which philosophy of a certain type was

bound, under the present circumstances, to make.

But it is, of course, the attack of naturalism upon the world of mind, of consciousness, that is most serious for us religious people. And here we have something quite different from that which the nineteenth century psychologists or the sober psychologists of our own time would claim. The naturalists not only assert that psychology is an independent science, that all the phenomena of mind go by natural and inevitable regular laws, with no exceptions; they also insist that all that is mental is reducible ultimately to purely mechanistic terms. The old fashioned materialism, to be sure, disappeared practically at the very beginning of our country, or the end of the last century, but it has had a resurrection under a new form with the new name of behaviorism. Extreme behaviorism is a thing so extreme that I must confess even as the Devil's Advocate I can't take it very seriously.

But there are other forms of psychological theory not so extreme, yet which do have the tendency to unify by means of levelling down instead of levelling up, of explaining the higher in terms of the lower, and ultimately, through the intervention of biological concepts, to explain and reduce the phenomena of mind and consciousness to merely mechanistic terms. The claims of these schools are sweeping away large numbers of our young men and our young women. You can easily see what the result of that kind of psychologizing is, and must be, upon the religious interests of us all. If you take a monistic view of that sort, it means that there is no such thing as a real human self, or a real will. It means that mind has no influence in directing any of the actions of the body, and that it will be no longer possible to maintain those two conceptions which are so dear to the religious heart, the thought of moral responsibility and personal immortality.

This is a serious situation, created by

science and pseudo science, science and naturalism, science and science falsely so called. What are the liberals going to do about it? What are they doing about it? What should be their attitude, or what is it? A question like this would be very easy to answer for the fundamentalists or for the Catholics, whether Roman or Anglican. For them, the answer is to be found in the truth which was first delivered to the fathers by the prophets, established on the fact of authority, the Bible or Church, whatever it be. No more argument is needed. But what is the liberal going to do? What can he say? The liberal doesn't know what he believes.

The only thing he is certain about is that the fundamentalist and the naturalist are both wrong. As for God, he really has very little notion of what God is. There is a farmer in a village near Williamstown, who was asked some years ago, in an experience meeting, to tell the assembled brethren his idea of God. He replied, "Wal,—my idea of God is a kind of an oblong blur." That is a pretty good description of the idea of God held by many liberals. We have no definition we are willing to stand for, nor have we any particular doctrine of an exact sort which seems to us really fundamental. We do believe in God, to be sure, a God of a vague kind, and we do stick to the assertion that this is a religious world. But when asked why we believe in God, we are almost as much puzzled as when asked what we mean by God.

I wish each of you would ask yourself what you mean by God. What is your definition of God? And also why do you believe in him? If you are a liberal of the type I have been speaking about, it is no longer because of authority—you do not believe in him because the Bible says so, or because the Church says so. Nor do you believe in him, I am pretty sure, because of any of the famous three historical arguments for the existence of God which for so many centuries played

such an important part in philosophy and theology; the ontological argument which proved the existence of God from the conception of his essence, the cosmological argument which proved from the fact of existence that there must be a Great First Cause, and the teleological argument which proved the existence of a designer because of the marks of design in nature. The first two of these arguments received their *coup de grace* from Kant, and the third one was so seriously wounded by him that it was not very hard for Darwin and his followers to put it out of the game altogether. Now that whole matter is settled.

There is still a big problem here which needs much more thrashing out than it is receiving. Still, it remains true, I think, that there are very few liberals who really base any of their belief in God seriously on marks of design in nature, or who would attempt to prove the existence of God to an unbeliever by pointing out the wonders of anatomy and physiology.

Where, then, is the foundation of our belief? Is it based on philosophy? If so, on what philosophy? There are as many different kinds of philosophy as there are different kinds of liberals. Some are monistic, some pluralistic, some realistic, some idealistic, and almost every school of philosophy among the liberals regards as absurd the position of all the other schools. Take the position of the monistic idealists. A very large part of them, surely, have given a picture of the universe which, when it is analyzed, does not differ very much from that of materialism and mechanism except in the kinds of labels and the kinds of names that are used. They have given us a God who presents us with safety, as William James used to say—absolute safety, but a safety compatible with every relative danger. For the sake of getting pragmatic value into our theology, our God, we may turn to some forms of pluralism and with William James and H. G. Wells, believe in a finite God; but if asked why we be-

lieve in him, about the only reason we can give will consist in pointing out how difficult it is to believe in an infinite God.

I would not want to be understood to mean that philosophy has nothing to contribute, or has as yet contributed nothing to religion; it is contributing, I think, a good deal of value, but what it is contributing of value is chiefly of a negative sort. I think that the chief value of philosophy to religion at the present juncture is in defending the religious view of the world from the attacks of an unjustified and rather absurd naturalism, science falsely so called. Philosophy is able to do that, and I think is adequately doing it. But when you come to ask from it something more positive, you probably will agree with me that its contribution towards a firm religious belief is really very slight.

I am occasionally asked by students, as I suppose every college professor is, to clear up the whole religious matter for them. Sophomores come to me and say, "You know, something awful has happened; I find I can not define God any more, and I can not prove his existence. This, of course, is because I have not studied philosophy. Now will you not just clear the whole thing up? I could listen to you for three or four minutes—won't you just settle it all for me now?" Well, what can I say to such a delegation except, "My dear boys, I am in the same boat with you." We are all in the same boat.

Or are we? Perhaps not. The more mature of us, of course, have had experiences the young men have not had. To the deeply religious man there are varieties that arise out of his own indescribable experiences which these young men have not yet had, which perhaps some day they may have, and those things I suppose make religion very real to us, and ought to. And yet we ought to raise the question, "Are we justified in taking those things, those experiences, as having any really logical value?" Doubtless we

are caused to believe, and to continue to retain our belief by these experiences; but do they logically justify our belief, or can we use them as a really logical argument in proving the religious view of the world to those that have not had the experiences in question? I know what the answer of a large number of the psychologists will be. Professor Leuba, whose book I hope a great many of you have read on *The Psychology of Religious Mysticism*, a book full of challenge, which I think every leader of the religious life ought to read,—Professor Leuba insists that the question whether or not the experiences of the inner life are of any real evidential bearing on the existence of God, is a question which only the psychologists are in a position to investigate and answer. And Professor Leuba goes on, as you know, to insist that the psychologist's answer is emphatically "No." Certainly a great many psychologists would agree with Professor Leuba in that assertion.

Again I ask, have we really anything of a logical sort to justify our belief in God? Why do we believe in God? Is it from the will to believe? I suspect it is, in the case of a good many of us, and this is a perfectly good cause for belief. Can we honestly say that it is a logical justification of belief? Or can we use it successfully to win over unbelievers who do not happen to share with us the will in question? Or is the continued religious belief of most liberals really due to the inertia of convention and custom? Is it only a kind of necessary poetry? A kind of aesthetic naturalism, as someone has called it? Is it merely naturalism and morality suffused with emotion, or a kind of pleasant feeling which is altogether lacking in definite and certain content?

This age is, of course, an age of uncertainty and indefiniteness, but I wonder if

there be anyone else who is quite so indefinite and quite so uncertain as the religious liberal? He knows neither what he means by God nor why he believes in him. It is not surprising, therefore, that a growing number of religious liberals spend most of their time and energy and thought upon boys' clubs and soup kitchens and things of that sort, and leave out of consideration the weightier and more difficult matters of religion, properly so called.

Here it does seem to me is to be found one of the mistakes of religious education. In our churches especially, we are doing so much to teach young people proper and efficient means of service that we forget that the source of any really strong, efficient religious life is not in the outer, but in the inner world. If you stop to examine our church services, you will admit it is very difficult to find a place in them where an individual can really worship. We are so busy collecting and distributing and canning the precious fruit of our lovely plant that we have forgotten to appreciate its beauty and its fragrance and, in fact, have even neglected to water its roots.

Let me say in conclusion that I have tried to be just as disagreeable as I could be, and that I do not really in the bottom of my heart think the situation is quite so black as I have tried to paint it. To some of the questions I have raised, I have my own answers; in connection with others, I confess I feel very much in the dark. But at any rate, my function this evening is not to answer questions, but to raise them, and to make them just as pointed and just as disagreeable and therefore just as challenging as possible. And I beg you to believe that it is not my fault, nor by my own choice, but by the decree of your committee that I have acted as the Devil's Advocate.

BASIC ASSUMPTIONS OF SCIENCE IN THEIR BEARING UPON RELIGION

I

ADDRESS OF PRESIDENT D. W. MOREHOUSE*

THE CONCEPT OF DYNAMICS

"Bacon pointed out at a distance the road to true philosophy: Galileo both pointed it out to others, and made himself considerable advances in it."

—David Hume.

The century following the death of Copernicus produced three great men of remarkable genius, an observer, a mathematician and a physicist. Kepler, who devoted a lifetime to the discovery of the three laws of planetary motion which bear his name, did not conceive of their dynamical explanation. MacMillan says:

"He was content to ascribe them to the intelligence of an angel who guided the planets in their courses. His was the age of spirits and Kepler's interpretation of uniformities was Animistic. The foundations of dynamics came only with the genius of Galileo who had little liking for the conceptions of Animism. His induction that the natural state of a body was uniform motion in a straight line, and that a departure from that state was due only to force, was one of those great breaks with the Past which occur at rare intervals in human history and which have raised the race of men to its present intellectual level. Galileo initiated a new age, the one in which we live, the age of dynamics."

The persecution of Galileo is a familiar household tale. It was the work of this great man, in his discovery of the revolution and phases of planets, that completely confirmed the Copernican doctrine. Father Inchofer of the Jesuits in denouncing him declared:

"The opinion of the earth's motion is of all heresy the most abominable, the most pernicious, the most scandalous. The immovability of the earth is thrice sacred. Argument against the immortality of the soul, the existence of God, and the incarnation should be tolerated sooner than an argument to prove that the earth moves."

Thus the controversy went on. The very thought of the earth as no longer the

center of the universe was the real crux in the situation. If the Copernican system was true, then the entire outlook of human thought was changed, and the old, time honored cosmology must be discarded. As the earth had lost its position among the heavenly bodies, so man would necessarily lose his supremacy in creation. Thus endless problems presented themselves.

CONCEPTS OF MECHANICS

"Nature and Nature's laws lay hid in night
God said, 'Let Newton be' and all was light."
—Pope.

Newton completed the work of these men and established the fundamental principles of Mechanics in the *Principia* which, as LaPlace has declared, "has a pre-eminence over all productions of the human intellect." Says Andrew D. White:

"There came, one after another, five of the greatest men our race has produced—Copernicus, Kepler, Galileo, Descartes and Newton—and when their work was done, the old theological concept of the universe was gone. 'The spacious firmament on high'—'The crystalline spheres'—'The Almighty enthroned upon the circle of the heavens' and with His own hands or with angels as his agents keeping the sun, moon, and planets in motion for the benefit of the earth, opening and closing 'the windows of heaven', letting down upon the earth 'the waters above the firmament', 'setting His bow in the cloud', handing out signs and wonders, hurling comets, casting forth lightning to scare the wicked and shaking the earth in His wrath: all this has disappeared."

The Newtonian theory was the natural outgrowth of the Copernican theory and had no less influence upon human thought. "In the first place," says McPherson, "Newton demonstrated the unity and similarity of the known universe. The old idea of a radical difference between things celestial and things terrestrial (already seriously damaged by

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the observations of Tycho Brahe and Galileo) was now definitely refuted. The whole planetary system was seen to be ruled by one law. In the second place, as Hoffding has truly remarked, 'It was now clear that the fixed and law-abiding order of Nature, prevails not only upon this earth but also throughout the universe.' Thus we have the beginning of mechanism—the whole universe reduced to a machine.

Quite contrary to the reception of the Copernican system, this thought was quickly grasped by the theologians. They had here, from a profound scientist, just what they had been looking for—a perfect system ruled over by a carpenter God. For Newton, in his perfect order of things, proves the existence of a God; an idea which drew from Leibniz the criticism that "Newton had compared the universe to a clock which required the constant interference of the clockmaker."

Here we find a splendid basis for Deism, the doctrine which holds sway so strongly today, of a God external to his work. Many of the great men of England seized upon this idea and appropriated it to their use. The writings of Ferguson, Paley, and Thomas Dick are known to many, and through them the mechanistic conception of the universe had a profound influence on human thought and prepared the way for Deism by commending it to the rational faculties. It was LaPlace who cried out in protest to this great wave, "I have no need of the hypothesis of a God."

COSMOGONY

"The greater the sphere of our knowledge, the larger is the surface of its contact with the infinity of our ignorance."

The ancients generally did not clearly distinguish between Cosmology and Cosmogony. "There had been implanted," says Andrew D. White, "along through the ages, germs of another growth in human thinking; some of them even as early as the Babylonian period. In the Assyrian inscriptions we find recorded

the Chaldeo-Babylonian idea of an evolution of the universe out of the primeval flood or great deep." This thought was adopted by their neighbors, the Hebrews, but was soon stifled by the more powerful influence of their inherited doctrine. The Ionian school developed the idea more clearly. Anaximander, for instance, conceived of the visible universe as the result of evolution, and Aristotle carried it to a point which approached modern views. Notwithstanding the work of these men, the idea of creation in six literal days predominated in the minds of the masses for hundreds of years.

Probably the first great factor that influenced the church to accept these new doctrines was the work of Ralph Cudworth in his *Intellectual System of the Universe*, published in 1698. He argued most effectively against the prevailing mechanical theory and set forth the idea of a divine immanence in both theology and science. He says:

"Nevertheless, the substance or matter out of which the world was made was not itself made but always ready at hand, and subject to the artificer, to be ordered and disposed by him. For the making of the world was not the production of it out of nothing, but out of an antecedent, bad and disorderly state, like the making of a house, garment, or statue."

It seems extremely difficult to locate the first idea of a nebular hypothesis. The Scottish astronomer, James Ferguson, strongly suggested the idea in the following sentence:

"In the beginning God brought all the particles of matter into being in those parts of open space where the sun and planets were to be found, and endowed each particle with an active power by which these neighboring and at first detached particles would in time come together in their respective parts of space and would form the different parts of the solar system."

We know that history gives the credit for the nebular hypothesis to Wright, Kant, LaPlace, and Herschel. The first two developed it theoretically and from a deductive point of view. They said there might be nebulae out of which solar systems evolved. Their ideas were wholly speculative. Herschel showed by direct

observation that there are nebulae and was the first to develop the hypothesis by inductive methods. We know that the nebular hypothesis was received very calmly at first. There were a few outcries against it, but LaPlace published it only as a speculative theory, an appendix to his *Celestial Mechanics*, and Herschel did not publish his ideas except in scientific papers of the Royal Society, which were not read by the masses. The opposition from the theologians was not more vigorous than from most scientists. The exact nature of a nebula was not known. The question arose as to the difference between nebulae and star clusters. Was it simply a case of optical power of resolution? And again science halted for a time.

THE CONTRIBUTION OF PHYSICAL SCIENCE TO THE DEVELOPMENT OF RELIGION

One is forced to recognize that physical science has contributed very little to the immediate and direct development of religion. Its function has been more comparable to a balance wheel or testing engine. The story of the eternal struggle between science and religion proves the statement. One may consider this a contribution, but I have given the positive connotation to the expression.

One need not review the struggle concerning the physical interpretation of natural phenomena. Religion's horizon has completely outgrown these controversies. The physical sciences have expanded until they, too, have merged into that realm of incomprehensibility bordering on infinity toward which religionists point. It is about as difficult to comprehend the expanse of our physical universe in the light of modern knowledge and development as it was the mobility of the earth in the days of Galileo. Time and space have always been fundamental factors in the teachings of Christianity. The finality concept has been terrifically shattered, if not completely annihilated.

Today men are turning to the physical sciences for objective proof, even in that realm which is considered purely spiritual. Examples of this are not easy to recite. The proof is too indirect and the logic inductive. Quoting the words of Dr. Curtis of the Allegheny Observatory before the American Association for the Advancement of Science,

"There seems at present to be a gap between the outer universe and that of the atom. Personally I am ready to admit another gap between the world of matter and that of spirit. With energy, matter, space and time continuing, with nothing lost, are we ourselves the only manifestation that comes to an end, that ceases, is annihilated at three score years and ten?"

"What we crudely call 'spirit' of man makes new compounds, plays with the laws of chemical action, guides the forces of the atom, changes the face of the earth, gives life to new forms, a creative spirit which reasonably cannot cease to be. This thing, soul, mind, spirit, cannot well be an exception. In some way, as yet impossible to define, it, too, must possess continuity. The concept is old, but the conclusion is inevitable."

"This statement is further proof, if any were needed, observes the *Utica Press*, "that there is no real conflict between science and religion. What Dr. Curtis says can be discerned in varying forms in the teachings of many scientists." The *Philadelphia Evening Public Ledger* remarks that, "if we accept Dr. Curtis' thesis, that the soul, or spirit, cannot be an exception in this infinite world, we have removed the artificial barrier which has long existed between science and religion." Scientists have had little to say about immortality, it is noted; but, continues the Philadelphia paper, "If science seeks to find what is beyond life as we now know it, it may find its conceptions of the known manifestations of life clarified and exalted."

I am disposed to say that the concept of evolution which started in the physical realm and not in the biological realm is science's greatest contribution to religion. This needs intelligent, persistent and sympathetic interpretation. The physical universe is incomprehensible. If this is true, what about the spiritual universe?

In the physical universe we comprehend it just as far as we can, from observations, measurements, and analogies. With these we develop a formula, wherein we blindly substitute other data and take the result. I cannot comprehend the mass of the sun in terms of pounds or tons, but I can in terms of planets or earths. I cannot comprehend the distance from the earth to the sun in terms of miles, but I can understand the scale of the solar system. The term light years is an idle phrase so far as the human intellect is concerned. The only thing that I can comprehend is the ratio of distances measured in this unit.

How can we justify some of the concepts of God doled out to the boys and girls from the platform, pulpit or press, in the light of these physical concepts? A static religion is infinitely less tenable than a static universe, which is not tenable at all. Why ignore these facts and thus give at least countenance to some of the present day literature?

How can we bring about this larger concept of God? Partly, at least, by a proper presentation and interpretation of nature with respect to life. This idea is traceable in the philosophy of the ancients, but it was veiled in mysticism and pseudo-science. They looked at nature backwards. Things had started from a perfect beginning. As time went on, the world—their universe—had been visited by dire calamities, great cataclysms had destroyed the perfect order of things. Nature was fixed. Plant and animal forms were unchangeable and man himself had had a very short history, and was the degenerate remnant of perfect ancestors. Deduction was their method of arriving at the laws of nature.

Roger Bacon is given much credit as a pioneer in bringing about the new viewpoint. He utilized the intellectual experiences of the race. Not until comparatively recent times did this nucleus of truth (idea) penetrate the great mass of human thinking. It was the bold state-

ment of the astronomer, that things evolve and grow from a simple primordial state according to a natural order, that startled the world. This great postulate turned men's thoughts to higher planes, to nobler outlooks, to a hope and future wherein there was an incentive to live, wherein the philosophy of life had a real meaning, and humanity a glorious opportunity. Its first application to astronomy gave it an attractive and safe background. The stars were impersonal and of so little consequence in men's lives that the new doctrine had time to win its advocates and prepare men for the new order of thinking. Existence became a continuous stream rather than a record of isolated events, and the experience of the race had meaning and value.

In concluding this rapid survey of the influence of science, we may pause to consider again the place man holds in the general plan. We are, or should be, "impressed by the general scope and dignity given to the evolutionary conceptions by recent studies of astronomy and physical chemistry. Evolution is not limited chiefly to the organic universe. That phase is one of the minor steps in the development that pervades the whole universe. In truth, we cannot restrain the feeling that the whole of organic development, from the earliest one-celled protozoa to human consciousness and the higher hereditary instincts, is trivial and transient from the standpoint of the development of the material cosmos."

Schiaparelli once called astronomy "the science of infinity and eternity," and the description is just. "These words," says MacPherson, "are often used by philosophers and theologians. Astronomy gives some definite sense of what they mean. The concepts of infinity and eternity are soul staggering, but they are less difficult than those of limitation of space and time. To the higher thought, the chief contribution of modern astronomy is doubtless this sense of the infinity of space and the eternity of time."

II

ADDRESS OF PROFESSOR F. S. C. NORTHROP*

IN CONSIDERING religion and its place in education, we must never forget that it is something which must be lived. It is not only a theoretical but also an applied subject. In the teaching of a theoretical subject it is sufficient to indicate the nature and characteristics of the subject itself. With an applied subject, however, it is necessary to teach, in addition, the precise laws or relations in which the subject matter stands to the objects and situations to which one would apply it. Have we not failed in this age to realize this in our thought about and teaching of religion? Or, to put the question in a different form, have we not failed to appreciate what is required in order that a subject may merit the serious consideration of modern thinkers?

The difference between a subject that is true but inapplicable, and one that is both true and practical, is clearly exemplified in the science of chemistry. The fundamental theory at the basis of this science was known by the Greek philosophers in the fourth century before Christ. As this theory existed with the Greeks it was true, but useless except as providing a purely theoretical outlook upon life; in the hands of the modern chemist it is transforming our industrial order to the extent that modern leaders in industry are expending millions in remodeling their factories that they may conform to its principles. Here we have an example of conversion from old ways of economic sin and inefficiency in which the so called hard hearted business man, who is the convert, is willing to pay millions for his conversion. Why is it that a theory which has existed since the fourth century B. C. is being applied for the first time and with such earnestness today? The answer is most obvious. The atomic theory in the hands of the mod-

ern chemist has passed from the theoretical into the applied stage of its development. The scientist who urges the use of the atomic theory can not only give, as could the ancient Greek, convincing arguments that it is true, but he can also indicate to the business man the precise relations in which the atoms of the theory stand to the crude oil, wood pulp, and raw coal of the factory. He can make it clear that the theory will work if applied, and knowing the relations of the atoms of his theory to other things, he can tell precisely what must be done in order to apply it.

Contemporary religious leaders exhort our students, our politicians, and our business men to take religion more seriously, and to apply it in the world of practical affairs. But is not their failure to do so, in a more effective way, due to a weakness in religion itself? Is not contemporary religion precisely in the same inapplicable form, so far as it fits this age, as was the atomic theory of the ancient Greeks? We can describe it in general terms, we can bring forward certain vague arguments in support of its truth and reasonableness, but when it comes to the essential point of stating precisely how its basic assumptions relate themselves to the habit mechanisms of human beings, the electrons and protons of nature, and the laws of supply and demand of the economic world, we have nothing very precise to say. It is as if the chemist exhorted the business man to apply chemistry to industry and then provided him with nothing but the atomic theory of the Greeks.

This is the fatal weakness of religion as an effective force in modern life. The fact of the matter is that with reference to our thought concerning religion, we are all, liberals and fundamentalists, theologians and most scientists alike, in

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the pre-scientific age. We have failed to grasp what is axiomatic and taken for granted in other realms of thought by every scientific student, namely, that unless a theory has reached the stage at which the precise relations in which it stands to specific facts of our experience and to the definite objects and situations to which we would apply it can be explicitly stated, it is not worthy of serious consideration as an applied subject. Until religion passes from its present primitive state into the stage of precise theoretical formulation and exact application, minds affected by the scientific temper may reconcile it with their science, by putting it in the group of hypotheses which they hope and even wish may be true, and in this state of mind they may say, as some of them do, that they have a religion, but they will never take it with any real seriousness. This will be so, not because they may not try to take it seriously, but because, in such an embryonic state, significant application beyond the stage of vague subjective feeling is impossible.

The problem of religion in education, and for that matter in the church also, is very much more fundamental than we have been willing to admit. It is not an administrative problem of devising courses or providing proper religious services but the much more difficult one of discovering whether there is anything beyond the preliminary stage of pious hope and exhortation to teach and preach in those courses and exercises. In other words, the task involves nothing less than a systematic survey of the scientific evidence concerning nature and man to determine whether we can rediscover the object of the religious experience and the precise relations in which it stands to man and to the elements and laws of the situations to which religion would apply.

Lest we underestimate the task, it is important to consider what this involves. First, we must search out those facts of science which bear upon the theory of the

nature of things, to determine whether the universe as we know it today provides any concrete meaning for the claims of religion. If the result is favorable, our aim must then be to put religion into a form in which its claims will be intelligible in terms of the facts of science, and in which the relations of the divine to nature and man will be so definitely indicated that one can see its precise applicability to human problems and thus learn how to go about the task of teaching and applying it. In other words, religion must rediscover some specific significant meaning for its claims and construct a new theology which will indicate the precise relations in which the divine "factor of fact" stands to the entities and laws of this universe.

This means that most of us must change our attitude toward natural science. Instead of deprecating it as do the fundamentalists, or giving lip service to it and then proceeding to ignore it as do most of the liberals, or regarding philosophy and religion as an antidote to it, or believing in the theory of evolution and ignoring the rest of it, we must really master natural science in its philosophical aspects. We must study it sufficiently to understand precisely what it does say about nature and man when one grasps the meaning of its basic conceptions. It must be a prime requisite of anyone who pretends to interpret religion to this age, that he master natural science sufficiently really to understand its fundamental ideas. To make religion intelligible to any generation means to state the relations in which it stands to the fundamental conceptions of the time. There is no gainsaying the fact that our fundamental conceptions are scientific in character. How then, unless he knows natural science, can the religious leader possibly hope to perform the task which every age has the right to expect from him? The occasion calls, therefore, for a thorough going survey of the fundamental principles of science and for a

tracing of them back to the conceptions of man and of nature which they imply. We need, in short, a philosophy of the natural sciences.

When we turn to the principles of science with the purpose of discovering such a philosophy, what do we find, and what are the bearings of these findings upon religion?

It is convenient, in considering the principles of science to divide them into two groups. There are those principles presupposed in the methodology of science, and those involved in the conclusions reached by means of that methodology. Let us consider the former group first.

It is a very venturesome person who would attempt to frame a definition of science, except in most general terms. The only principle which seems to apply to all cases of scientific work amounts to the assertion that science is an unusually strenuous and disciplined attempt to determine our conception of anything by a study of objectively verifiable facts. Although this principle is so general as to appear almost commonplace, it is by no means insignificant. It is this principle which locates the test for truth in objective factors concerning which men can agree, instead of in subjective impressions, opinions, and unverifiable intuitions, around which custom, and prejudice, and ignorance cluster.

It is this principle which enables science to progress, correcting its own errors and gradually transforming the habits of thought and action of its followers into those truthseeking attributes of life which the great Plato called divine. It is this principle which makes the history of science the story of a more purely spiritual development than is the case with the history of religion.

Hence, science pulls men together by peaceful means. It reduces every question to the impersonal task of observing certain facts. Thus, progress is made without any "loss of face," without the

hurling of the epithets "sinner" and "heathen," and without the necessity of breaking anybody's head. The prejudices and passions of men are to be softened, and the kingdom of heaven brought in by the observation of facts, the use of reason, and the transformation of man and nature by the application of the principles which reason discovers. Such is the significance of the first methodological principle of science.

We must turn to the consideration of those principles which express our scientific conception of the nature of things. What are these principles, and what do they imply concerning the claims of a rational religion?

It must be admitted than an answer to this question is not available at the present time. Science presents itself rather as a group of separated masses of information and principles. There is immediate need that these materials be brought to bear upon one another, and that they be traced back to the basic conception of the nature of things which they imply. Were this task carried through with but a few of our most fundamental scientific theories it would lead, I have reason to believe, to a fairly accurate inductive philosophy of science. More unity and permanence, than the welter of evidence indicates, would be found in scientific thought.

Furthermore, the basis would be made for the formulation of an adequate theory of values. It is said again and again by contemporary religious leaders that science provides us with knowledge but leaves us without the ethical controls essential to a proper use of it, and that contemporary religion must supply this want. This assertion I believe to be false in both its parts. Even though it were true that science omits the ethical principles, it would still be necessary to deny the thesis that contemporary religion can provide them. The only person who is competent to use scientific knowledge ethically is not one governed by a

general ethical platitude which has been brought into science from outside, but one acquainted with the specific scientific knowledge in question and governed by ethical principles which have been developed out of and in awareness of it. The only religion which can provide the ethical controls necessary for a proper use of the information which science places at our disposal, is one which is grounded in science and which has developed its doctrine in connection with the doctrines which science has revealed.

However, the theory that science does not and cannot provide ethical principles is false. It rests upon a fallacious conception of science, such as one might derive from looking at the pictures of new inventions which are contained in a popular science magazine. It must never be forgotten that it is the function of science to trace its findings back to theoretical principles as well as forward to practical applications. There is Newton and Darwin and Einstein, as well as Edison. One must remember also that biological and psychological investigations gave rise to the ethics of Aristotle, and that mathematical and astronomical investigations provided the fundamental categories out of which the ethical and religious philosophy of Plato was constructed. The true relationship between science and ethics was clearly expressed by Plato in his distinction between a bare isolated truth and the "ideas of the Good." A man has truth when he knows that a certain fact exists. It is not, however, until he knows that fact in its relation to all other facts that he has genuine knowledge. It is in the interrelationships in which science discovers its facts to stand that ethical principles are to be obtained. Then only, is information seen "in the light of the Good." Again, we are forced back to our previous thesis. The only valid ethics must be one which relates itself to science, not as a foreign factor from without, but

as a natural growth from within. Its principles must arise gradually and with the painful travail of the body and soul of the scientific thinker, as he works carefully back from the facts and fundamental principles of science to their interconnections. An adequate ethics, like an adequate religion, must wait upon a philosophy of the sciences.

This program for religion is not an impossible one. An ethics and religion which was in complete accord with the strictly objective emphasis of scientific methodology and which was an outgrowth and articulate expression of the dominant conceptions of inductive science existed in the Greek world, in the philosophy of Plato and Aristotle. There is nothing except the dearth of thinkers who are seriously interested in the theoretical and philosophical aspect of technical science to prevent the discovery of a similar philosophy today. In fact, the theory of relativity seems to be necessitating precisely such a movement within science at the present moment. Out of the contemporary issues in relativity and atomic physics and organic biology, I believe, a new scientific conception of nature will soon crystallize. *

May I close with a statement which I made at the beginning of this paper. The issue facing religion is not the problem of devising courses or providing proper religious exercises, but the very much more difficult one of discovering whether there is anything beyond the preliminary stage of pious hope and exhortation to teach and preach in those courses and exercises. It is to an inductive philosophy of science that we must look for a solution of this difficulty. Furthermore, I believe that when such a study of the philosophical implications of science is completed, we will be in the possession of a philosophy of life which in its ethical and inspirational qualities and in its effectiveness will surpass anything which conventional religion now offers.

BASIC ASSUMPTIONS OF RELIGION IN THEIR BEARING UPON SCIENCE

I

ADDRESS OF PROFESSOR JAMES H. LEUBA*

RELIGION AS A METHOD OF PRESERVING AND ENHANCING LIFE

Two kinds of relations are maintained with God: the face-to-face, and the mystical. A comparable double relation exists between the child and his parents. At times they are used as instruments for the realization of the child's desires. In order to secure through them his wishes, he begs, he obeys, he is amiable, he may even praise and cajol—that is the face-to-face relation.

At other moments, the child finds a deep and sweet satisfaction in being with his parents, or in the mere thought of their near presence. When in that mood, the child does not seek to induce the parents to do for him some particular thing; he is passively enjoying their presence. If we call this type of relation between man and God mystical, it is for lack of a better word. We mean by it no more than a sense of kinship with the Ultimate Reality.

These two types of relationship have existed side by side from the beginning of the religious life of mankind; but the face-to-face relation has become the dominant one. The historical religions express essentially, in their creeds and their several forms of worship, ways and means of securing God's help; they represent a social relation similar to the face-to-face relation of the child to his parents. The God of the religions is a God in direct affective and intellectual relation with man, able and, under certain conditions, willing to respond to his needs and desires. This God-Providence may fittingly be called the God of the religions,

and the traditional worship of that God for the preservation and enhancement of life may be called the religious method.

SCIENCE AND THE RELIGIONS

The development of the physical sciences has led to the conviction that the religious method is ineffective in the physical realm: it is, for instance, useless to pray for rain.

The biological sciences have led or are leading to the conviction that the divine personal Cause, supposed by the religions to be active in the cure of disease, is ineffective: it is, for instance, futile to seek to stop the action of microbes in the human organism by praises or supplications addressed to the God of the religions. An attitude of humility or repentance for having disobeyed God's will avails just as little to arrest the activity of microbes. But cheerfulness, however induced, whether by confidence in a vaccin, or by faith in the Last Sacrament, or by simple prayer to the God of the religions, may have a beneficial effect.

The psychological and the social sciences have produced or are producing the conviction that the God of the religions is equally ineffective in the formation and reformation of character as he is in matters physical and biological: the informed person relies less and less on the method of the religions and more and more on methods of character formation and transformation derived from a detailed knowledge of human nature. Neither parents, as educators of their children, nor the directors of institutions for the morally warped, place their trust in God; they reply instead on the action of natural laws, physical, biological, and mental. The actual effects of prayer, traditionally ascribed to the

*This is a summary of Professor Leuba's convention address. It should be read in connection with a paper on the same general field in the January issue of this journal, pages 24-28. Dr. Leuba is Professor of Psychology, Bryn Mawr College, Pennsylvania.

intervention of a Divine Person, are now known to be the direct, subjective results of the prayerful attitude. The religious method applied to the human mind is a disguised psychotherapeutic method.

The method of the historical religions—the worship of a God in direct intellectual and affective communication with man—has been found wanting. It does not work. Therefore religious worship, as we have it, is doomed to disappear even as magic has disappeared, and for the same reason. This prophecy is in rapid course of realization; the churches generally regarded as progressive and effective are those which make the widest use of the “secular” methods of education and the least use of the religious method.

The attempt is sometimes made (it was made at the Convention of the R. E. A. in Philadelphia by one of the main speakers) to ridicule certain psychologists by saying that they pretend to replace religion by scientific analysis. As well say that the physiologists pretend to replace the treatment of disease by physiological analysis! No, the physician administers the treatment, the surgeon removes the tissues, following methods indicated by centuries of microscopic analysis and other researches. Similarly, the psychologist does not propose in any particular case to improve human nature by performing a psychological analysis, but offers a treatment suggested by a knowledge of human nature acquired through psychological research.

The method of the religions should be set aside not only because it is inadequate but also because it does harm. There is no time now for setting forth the grievous evils of the traditional clinging to the belief in the God of the religions. I shall mention only one of them. The religions are guilty of misdirecting man in his search for ways and means of moral improvement. Instead of pointing to the real sources of moral knowledge

and inspiration, they send him on a fool's errand to a God who does not answer. We do well to lament the neglect of moral education in our schools and colleges. But is not the main cause of this neglect the habit of regarding moral matters as belonging with the religions, as dependent upon the religious method, and, therefore, as outside the province of the lay schools? Not until the Christian nations shall have renounced that tradition and shall have separated the problem of the formation and reformation of character from the God of the religions, shall the schools be able to fulfill the moral task which is theirs.

WHAT KIND OF RELIGION WOULD SCIENCE COUNTENANCE?

Does, then, the teaching of science make impossible anything which might be called religion? What of the relation with God we have called mystical? Is there any antagonism between any science and the conviction that man, in some way, somehow, is part of a universe with a purpose, that he cooperates in a universal, meaningful life? Such a conception of the Ultimate would give the assurance that life is not a fleeting show destined to disappear without leaving any trace behind, that it is not meaningless, that moral effort is worth while. Thus, some of our deepest yearnings would receive satisfaction, among them the craving for kinship with the Universe.

What has any particular science to say regarding such a conception of the Ultimate? Nothing at all. The nature of Ultimate Reality is a philosophical problem, to the solution of which the several sciences contribute their respective knowledge. As a matter of fact, they offer certain items of knowledge which may point to the solution vaguely sketched above.*

*See pages 27-28 of the January number of this Journal.

THE PROBLEM OF LIFE

I would like to persuade you that the vital problem we all have at heart is not the discovery of what religion really is or should be. That is a misstatement of it. The problem before us is how best to live. That problem has two main parts:

1. The determination of the goal to be reached. If it is to be adequate, the goal should satisfy both the heart and the head; it should call forth enthusiastic allegiance. Its discovery involves, of course, a comparative study of values and an organization of them.

2. The determination of the ways, the methods, or techniques for reaching the goal.

The first part of the problem—the fixing of the goal—is one of the foremost tasks of philosophy. A perfect solution would come only with perfect knowledge and wisdom; but solutions sufficient to direct and sustain human effort may be had at a lower level.

The second part of the problem—the determination of the method for attaining the goal—concerns the sciences: the physical sciences tell us how to control the physical universe; and the biological, psychological, and social sciences how to

control the forces manifested in man so that he may move towards the accepted goal.

The historical religions claim to have solved these two vital problems: they have set forth goals and they have offered methods of attaining them. This they have done, in ages of ignorance, by alleged revelations.

The double task, claimed by the religions to have been performed once for all, is now taken up again by science and by philosophy. What it is which will be called "religion" when the present form of worship shall have passed away, matters extraordinarily little. What matters is that we should not let ourselves be bewitched by the magic of words, of formulas, of institutions. The word "religion" might well be dropped and we be the gainers, provided the two parts of this problem continue to beckon us onward: Where shall we go? What method of progression shall we adopt?

I have spoken almost exclusively of method because the outstanding feature of the established religions is an ineffective method—a method which, moreover, at times openly, but more usually indirectly and invisibly, stands in the way both of scientific knowledge and moral progress.

II

ADDRESS OF PROFESSOR WILLIAM ADAMS BROWN*

OUR theme this afternoon is "The Basic Assumptions of Religion in their Bearing upon Science." I can conceive no subject more timely and more important.

It is well, now and again, for every teacher to reconsider the presuppositions which he brings to his teaching, that he may discover whether the foundation on which he is building is strong enough to carry the load he is putting upon it. But for us who are teachers of religion, this is peculiarly necessary, in view of the

crucial importance of the issues that are at stake. We are not building houses, but the lives of men. And no task can be conceived in which the consequences of shoddy work may prove more disastrous.

We are particularly fortunate in having Professor Leuba with us to join in this re-examination. If any of us were tempted to take the matter lightly, I think he has brought us back to bed rock. For, if I rightly interpret what he has just been saying to us, he has been challenging the entire enterprise of religious education as it is now carried on in our

*President elect of the Religious Education Association; Professor in Union Theological Seminary.

churches, telling us that it rests upon pre-suppositions which the sciences have undermined, and that it employs methods which are not only intellectually untenable, but morally disastrous. We cannot evade this challenge, and I am sure that we do not desire to do so.

We shall first endeavor to make clear to ourselves what the basic assumptions of religion are. We shall then consider Professor Leuba's criticism and try to determine how far it is well founded, and, finally, we shall ask ourselves what conclusions follow for our work as teachers of religion.

At the outset, there is a preliminary difficulty to be faced. We are to study the basic assumptions of religion. But what do we mean by religion? The term is used in the vaguest possible way, and our scientific students of religion usually begin their definition of religion by disclaiming their ability to define it. I do not deny that the difficulty is real, but it may easily be exaggerated. A term may be ambiguous not because it is meaningless, but because it has so many meanings. What do we mean, for example, by science? I imagine that if we were to ask this question we should get more than one answer, and what some of us would call science others would call philosophy and still others prejudice.

Religion is in no better case, but it is in no worse. Indeed, I venture to think that if one were to traverse the more important books about religion which have appeared during the last dozen years, he would be surprised not by the amount of difference he would find but by the extent of the agreement. All serious students of religion agree that religion is a practical interest of man; that it affects the whole man—thought, conduct, and emotion; that it involves a sense of dependence upon some superhuman reality to whom man offers worship and from whom he may, and very often does, expect help.

But we are not shut up to generalities. We are not a parliament of religion

studying comparative religion out of intellectual curiosity. We are a group of active workers in a group of religions, near enough together to have much in common. We belong to the great theistic tradition that unites Jews and Christians and that is shared by Catholics and Protestants alike. The assumptions we wish to test are the assumptions we employ in the worship in our churches and synagogues and in our private prayer; and it is these assumptions, if I understand him aright, that Professor Leuba invites us with him to question.

The "God of the Religions," of whom he has been speaking to us, is the God whom many of us, Jews and Christians, worship, and the right way of worshipping whom we desire to transmit to our children. What, then, do we assume about God? What do we, Jews and Christians alike, take for granted when we say we are religious? First of all, and most important of all, we assume the fact of God; and by God we mean a superhuman reality, deserving our worship, with whom we stand in relations of personal fellowship. So far, if I understand him aright, Professor Leuba can go with us. He, too, thinks it reasonable to believe in a superhuman reality with whom we stand in personal relations, though, for some reason which it is difficult for me to follow, he denies that this personal relation is a "face to face" relation. Secondly, we assume that this relationship is a mutual relationship—what Professor Leuba would call a social relationship—involving give and take. We believe that as we consciously relate ourselves to God in worship there is something in God that answers to our upward look and makes the relation in a true sense mutual, a communion or intercourse. And, finally, we assume that this relation may make a difference in our lives, indeed all the difference; that, of all the relations into which a man may enter, the religious relation is the most important.

Within this common territory there is room for wide difference of view, and we find it. Some religious people think of God as a person like ourselves, though infinitely greater and wiser; others see in personality only a symbol which we use as the least misleading terms for a being who differs from us so widely that he can rightly be described only by negations. Professor Leuba has reminded us that side by side with the tradition of a God who is personal in the familiar sense of that word there runs through historical religion the mystical tradition of a God who transcends all possibility of definition. Christians give Jesus a central place in their thought of God, while Jews have not yet seen their way clear to do this. Catholics give to the Church an authority which Protestants reserve for the Bible, and so forth. Finally, and this is a point to which I shall come back in a moment, we differ in our explanation of the way in which God makes himself known to man. Modernists think of our relation to this superhuman reality as mediated through the laws of nature; Fundamentalists believe that in addition to using law God has other ways of acting, ways that we call miracles in the older and technical meaning of the term. But these are differences within a common territory. In the basic assumptions already defined we agree.

The practice of religious people is the natural consequence of these basic assumptions. It consists in part of worship, in part of service. In worship we express our appreciation of the fellowship which it is our privilege to enjoy with God; in service we do the things that we believe to be in accordance with his will. The two are intimately related, and the activity in which this relationship finds characteristic expression is prayer. Prayer is a conscious effort to realize our relation to deity in such a way as to make a difference in our lives and in the lives of those who are dependent upon us. And what we wish to know is whether

we are right in believing in such a reality and in following such a method.

Professor Leuba believes that we are wrong. He is willing to admit a mystical fellowship with God. Indeed, he expressly says that in his opinion the knowledge thus far won by humanity points to the existence of "a spiritual power working in us, with us, and through us toward a spiritual end." But any relationship with God which can rightly be called social, any relationship that involves give and take, he rules out as not only intellectually illegitimate but ethically demoralizing.

He does so, if I understand him rightly, for two reasons: First, because the ascription of praise to God which constitutes a large part of worship, both Jewish and Christian, seems to him a form of flattery which is morally unworthy, all the more when (as Professor Leuba assumes) its motive is to secure benefits which ought rather to be sought through obedience to the laws of nature. But secondly, and more particularly, because the worshipper assumes that God will be moved by his prayer to act in an arbitrary or supernatural manner apart from law, whether physical or psychological. He would, therefore, rule out all prayer in the sense of conscious relationship to God which is believed by the worshipper to produce any result other than could be attained by our own conscious practice of the habits which we have been led to adopt as a result of our study of natural law.

The question which I wish to ask is how far Professor Leuba has correctly described what religious people do and believe and, secondly, how far he has correctly interpreted their understanding of the significance of what they do.

So far as his description of what religious people do is concerned, I think Professor Leuba is substantially correct. But when we go further and ask how far he correctly interprets their understanding of the significance of what they do,

we are obliged to challenge his interpretation at two points.

(1) He is at fault, I believe, in interpreting worship (as practiced in the historic religions) as primarily designed to secure benefits for the worshipper. That is sometimes, indeed it is often, the case, but far more often worship is the expression of that unselfish joy in fellowship which Professor Leuba himself approves and which by a not very happy use of the phrase, he describes as mystical. Certainly this has been true of the great masters of religion, men like St. Francis and women like St. Theresa, and I believe it is far more true of ordinary worshippers in our churches than Professor Leuba admits.

(2) Again, I think he is at fault in supposing that the use of the language of petition in prayer and in general the whole attitude which assumes that one's relation to God makes a difference in life implies a view of God as functioning outside of law in arbitrary and miraculous fashion. I am one who believes that if we knew all the facts, we should discover that all that God does he does through law and the more we learn of law the more we learn of God. But I believe that religious people are right in the conviction that conscious relationship to God, as it is realized in prayer, produces results that make a difference in life that can be brought about in no other way.

This is a question of fact and the thing that troubles me about Professor Leuba's paper is that at the very point where we want evidence he gives us assertion. He tells us that by following the method of science we can get better results than by following the method of religion. But there are multitudes of people who, as psychologists, are ready to accept all that Professor Leuba can tell us about the operations of the mind, who simply do not believe that this is so. They do not believe it because they have tried both methods and they find that in their lives prayer has made things possible which, so far as they can see, would not have

been possible in any other way. I confess that I am of this company.

In my book *The Life of Prayer in a World of Science*,* I have given examples of what prayer has meant in the lives of some of our contemporaries. Let me cite a still more recent example. This is the statement of a man whose book is being widely recommended as one of the best sellers. The author is a thoroughgoing modernist in his attitude toward religion and would, I am sure, agree heartily with Professor Leuba in his recognition that everything that happens to us takes place in accordance with psychological law:

"A few years ago I found myself involved in many activities. Appointments, committee meetings, schedules, plans, many requirements were heaped upon me, but I was an absent-minded college professor, who always lost his jackknife and could never find his hat. I was lost unless I could remember innumerable details and keep a great many things systematically in my mind. It was then I discovered what great things could be accomplished by the exposure, diagnosis, and reconstruction of prayer. 'God, help me to remember everything instantly the moment it is needed,' I said. The prayer was not in the words alone but in that reconstructed adjustment to the Divine Order which is God that he would do the remembering for me. My prayer was answered. I never forgot a single engagement or essential detail. I rose in a week to mastery of the entire situation."

Now no doubt we should want to check up the accuracy of Professor Weiman's statement on the last point. At the same time I think you will agree with me that such an experience as his is a fact among other facts which we have got to take into account. We have here a perfectly clear-cut issue that cannot be determined by dogmatic statements on either side but only by comparative experiment. Do we get better results by the way that Professor Leuba encourages us to follow, by dropping God out of our thoughts whenever we are consciously trying to improve ourselves, reserving God only for those hours of mystic communion which, thank God, he still makes room for? Or can we bring to all the

*New York, 1927.

experiences of our daily life the consciousness of the great unseen companion as a source of strength and guidance? If we are to be really scientific, we shall not pre-judge the case until we have gathered the data on both sides, with all the objectivity that we can master.

Why is it, then, that Professor Leuba, who in his initial definition of God gave us so much that was promising for the religious life, breaks off at the point where the need of some of the rest of us grows most acute? It seems to me that the explanation is to be found in the fundamental misconception that runs through his whole treatment, the misconception, namely, that science and religion are two antithetic ways of dealing with the same situation, so that if you use one you cannot use the other at the same time. The reverse seems to me to be true. The method of science and the method of religion are not exclusive but complementary. They are two ways of approaching a situation which cannot be adequately dealt with unless we use both. Just as the great scientists tell us that their greatest discoveries have come to them not when they were following out principles already accepted but in moments of intuition which seemed to them to come out of the clear, so the great religious geniuses are simply carrying this method to its legitimate conclusion when they tell us that when we have learned all that science can teach us there is still a realm of undiscovered possibility to which we can set no limits, to which we gain access through the life of worship and the practice of prayer.

If Professor Leuba had been content to say that there is much in the way in which religion has been believed and practiced in the past that is inconsistent with the assured results of modern science; if he had pointed out to us how much in the language of the historic liturgies causes difficulty for the young men and women who have been brought up in the scientific atmosphere, he would

have reminded us of something which is not only true but which it is most important for us to know. But the remedy for that situation is not to abandon the basic assumptions of religion. It is to rethink them in the light of new knowledge and to change our practice to make them function more effectively.

I have left little time for the last point I wish to make, and can suggest only in a half dozen sentences what science can do to help us to use these great assumptions rightly and fruitfully. For one thing, science can criticize the technique which the great masters of religion, who were the experimentalists of their day, have worked out and help us to distinguish their permanent contribution to the devotional life from its transient setting. Again, science can give us the intellectual framework into which to put our experience of God so that when it comes to us in our moments of prayer it will not contradict any basic intellectual conviction to which we are led by other evidence. Science can furnish us principles by which to test the leading which we believe comes to us through prayer so that we can tell whether we have been justified in our judgment or not. It can interpret to us the symbolic character of language and so make the use of the liturgy helpful instead of harmful. Above all, it can supply us with the technique through which the great social purposes that come to us in consecration may be actually carried out in this complicated modern world. These are but illustrations of many other services which one could name if there were time; which it is the function of such a body as the Religious Education Association to study.

But there is just one thing that science cannot do for us, and that it must not be allowed to do for us. It must not take away the joy that comes from the consciousness of a God with whom we can have a face to face relation and a personal communion that makes a difference in our lives.

NATURE OF SCIENCE AND OF RELIGION AND THEIR INTERRELATION

I

SOME CONDITIONS TO BE OBSERVED IN THE ATTEMPT TO COR- RELATE SCIENCE AND RELIGION

ADDRESS OF PROFESSOR GERALD B. SMITH*

VIRTUALLY everybody is cordially disposed toward religion—if only he is permitted to define what he means by religion. Likewise, in these days when the triumphs of science are so unmistakable, nearly everybody believes in science—provided such belief does not interfere unpleasantly with desirable habits of life and thought. If a writer may make the words “religion” and “science” mean anything he chooses, reconciliation or even identification is an easy task.

The motives of the host of well-meaning reconcilers of science and religion are entirely commendable. Certainly these two great realms of human aspiration and achievement ought to be working together to make life more rich and noble. Certainly two such admirable loyalties as religious consecration and scientific devotion to the truth ought to reinforce each other. Certainly we do not wish religious men to construct their programs without consulting science, nor do we want scientific men to have no share in the making of religious programs. By all means, let us have serious thought and discussion on this important theme. But let our thinking be something more than the rhetorical expression of pious wishes, and let the discussions face unpleasant facts as well as alluring visions.

In this paper I want briefly to call attention to certain considerations which must not be ignored or overlooked if we are to make real headway.

The words “religion” and “science” are really abstract concepts. There is no actual generalized religion and no actual

generalized science. There are many specific kinds of religion, and there is an ever increasing array of specialized sciences. We do not get very close to the question as to the relation between science and religion unless we ask *what kind of religion* we are talking about, and *what specific science* we have in mind. The so-called “conflict between science and religion” has not been a conflict between *every* science and *every* kind of religion.

The difficulties have arisen usually because a definite conclusion of a definite science has challenged a specific doctrine of a particular religion. By far the greatest amount of scientific discovery has proceeded quietly without encountering any opposition at all from religion. On the other hand, the religious program of many a church deals with wholesome training of character in a way which leads many scientists, along with other people, to desire this service of the church for their children.

So far as religious education is concerned, it is of primary importance to be sure just what kind of religion we approve, and then to ask just what specific scientific knowledge is pertinent to the task.

A scientist, purely as scientist, feels no need of religion. Do not misunderstand me. A scientist may be a profoundly religious man. He may be actively interested in religious education. But there is nothing in the requirements of his work as a technical scientist which demands religion in order to make his scientific work valid. So far as the content of any science is concerned, it is mastered by investigator, teacher, and student

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solely by giving attention to the facts and to the experiments devised to make sure of the facts.

It is, of course, obvious that no one is *exclusively* a scientist. And it is equally obvious that a person's esthetic or literary or humanistic interests help to make him a more valuable person. Nevertheless, the discipline of science is such as to require that the validation of scientific conclusions shall rest exclusively on scientific procedure. Science thus becomes sufficient to itself. Its natural development is in the direction of becoming more scientific. This leads to an increasing specialization, until the important scientific work of today is to large extent carried on by methods and presuppositions beyond the comprehension of ordinary individuals. In these increasingly specialized realms scientific technique is the only medium of understanding what it is all about. Religion (along with other non-scientific techniques) recedes farther and farther into the background as science becomes more specialized.

Consequently, a philosophy of reality which employs exclusively scientific concepts depicts a world in which religion finds no necessary place. Those who are concerned with the fate of religion are reluctant to admit this. There are constant attempts to make science affirm religious doctrine. It is a distinct shock to most religious people to be confronted with a philosophy which simply ignores religious ideas, and which presents a picture of the world purely in terms of scientifically tenable facts and conclusions, frankly confessing ignorance of that which has not been explored, and often with equal frankness making it clear that the processes of nature, when accurately observed, do not seem to indicate the kind of purposive control which religious philosophy has affirmed. The vogue of science is so great that a philosophy based exclusively on the findings of science is likely to have great weight. Religious convictions, from this point of view, are

asked to validate themselves by the canons of scientific accuracy. But since religious convictions did not arise as a result of carefully devised scientific observations, but grew up in the form of folk-ways in order to enhance and ennoble personal experiences, these convictions fare rather badly at the hands of scientific critics. Suspicion is then thrown on their validity, and religion is looked upon as something to be somewhat cautiously looked over before any commitments are made. It would seem that a primary task here is to point out the vulnerable character of a dogmatism based on science.

No one is competent to interpret the findings of science scientifically except the scientist himself. The very specialization of scientific procedure makes this inevitable. When a science passes from the mind of a scientist to the mind of an amateur, it is inevitably apprehended in somewhat pictorial terms. The pictures are taken from realms which supply useful analogies; but they are necessarily less exact than the technical formulas employed in the actual work of a science. Popular conceptions of science easily run into a kind of mythology. In the absence of methods of critical testing extravagant claims may be made as to what may be scientifically accomplished. Quacks seize upon some scientific term, like radio-activity, and undertake to sell nostrums alleged to embody quasi-miraculous powers. Until a person has actually learned by experience what does and what does not occur under given conditions, he is ready to expect anything. There is an enormous amount of quack "science" in currency. The desire of newspapers and popular magazines to publish picturesque stories makes the writing of such quackery a profitable venture. We should not be under the illusion that real science has taken general possession of the mind of today. Too often it is a type of mythological science which is in very truth a "false messiah."

Unfortunately, it is this type of pictorial scientific speculation which is most easily appropriated by religious interpreters. Its graphic form lends itself readily to practical homiletic applications. Some aspect of a science is taken because it presents an alluring allegory of a religious doctrine; and the doctrine in question is then commended on the ground that it rests on scientific foundations. In this popular use of science there is absent the one thing which makes science respectable, viz. the rigid application of valid methods of observation and testing. To claim a "scientific" foundation for a religious doctrine which rests its claim simply on superficial analogies, is unfortunate for both science and religion.

A scientist can speak with authority only in the realm in which he has worked with the methods of scientific inquiry. Scientists recognize this in the broad field of organized research. A true scientist is the first to confess his relative ignorance in fields other than his own. He has to depend on the investigations of others here. Unfortunately, this admirable modesty is not always practiced when the scientist deals with religion. It should be a truism that those who are working at first hand in a given realm know most about it. But in the case of religion, there seems to be a somewhat widespread assumption that men who are personally and actively engaged in the practice and the study of religion are less qualified to judge its value than are those who stand aloof.

There is plenty of provocation for this feeling. Too many preachers utter themselves in amateur fashion concerning scientific matters; and it is easy to assume that they know no more about religion than they do about the realm with which the scientist is familiar. But it would be easy, on the other hand, to draw up an interesting and ludicrous collection of amateurish statements concerning religion made by men with scientific reputation. Should we, therefore, discredit their science? The true implication of the scien-

tific spirit would be that those who have specialized in the study of religion are more competent to talk about it than are those for whom it has been a more or less casual affair. Scientific competency in physics or in biology does not in itself make a person any more competent to judge religion. It is quite possible that such persons would make a sorry mess of it if they were to attempt the actual organization of religion.

The inestimable service which scientific procedure renders is that it compels us to face the facts. We are always reluctant to face unpleasant facts. The stern discipline of the sciences in this respect is one of the most needed influences in human life. For if we do not face the facts, we shall live in a dream world; and sooner or later dreams must give way to reality. It is in the realm where religion has encouraged pleasant dreams that the intrusion of science is resented. So reluctant are we to give up the comforting visions of a familiar theology, that all sorts of subterfuges are tried. It is a hard conclusion to which we are often forced by the facts. The character of the world, as disclosed by the modern sciences, is so different from that providentially ordered world of the older theology, that radical readjustments become necessary. These readjustments occasion many a spiritual crisis when the old loyalty to what has been taught by loved parents is confronted by the new loyalty to the findings of careful research. Indeed, large numbers of thoughtful Christians today are perplexed and bewildered by these conflicting loyalties.

The procedure of the sciences offers no help to religious adjustment. Science is concerned to establish the facts. It is not concerned with the problem of what happens to the inner life of a person who is learning science, except in so far as what is called the "scientific spirit" is concerned. It is quite possible for a teacher of science in his very zeal for scientific exactness to take a brutal attitude toward prejudices which make the student reluc-

tant to give whole hearted assent to scientific conclusions. It must be admitted that the kind of religious instruction furnished by many a church is actually a hindrance to the acquiring of a scientific spirit.

The scientist is tempted to judge this kind of religion exclusively by reference to its relation to science; and the judgment is adverse. From this point of view, the sooner a student is freed from religious bondage, the better. To make the unscientific religious view seem ridiculous is an effective way to discredit it. So far as mere science is concerned, this procedure is legitimate. A scientist is accustomed to handling theories without gloves. But what happens to the inner life of a perplexed student is another story. The fact is that hundreds of earnest students in our universities are left floundering in the realm of their religious loyalties, just because the sciences are incompetent to deal with this problem. Some day we shall ask whether the wholesome development of a student's general morale is not quite as important as is his scientific knowledge. I am aware that in numerous instances teachers of science address themselves to this problem and help students to find their way. But there are also plenty of hard boiled scientists who are so little interested in religion that they feel no concern over the religious questionings of their students. Let me repeat it. Science, as science, does not furnish the technique for helping students to a wholesome religious adjustment.

The help to adjustment given by many religious leaders is seriously defective. If the scientist is likely to be concerned only with exact knowledge of the facts, the religious leader is likely to be concerned to preserve unshaken the loyalties expressed in the standard doctrines and confessions of the church. There is a subtle demoralizing temptation under these circumstances to search for some form of words which will enable the inquirer to keep on saying what the church wants

said, without flatly contradicting the utterances of science.

When this spirit prevails, religion indulges in superficial compromises without insisting on the stern necessity of facing unwelcome facts. No honest provision is made for thoughtful revisions of theological opinions. It must be confessed that much so called "liberal" theology is really very superficial. It seeks to keep clear of damaging conflicts with science, but it also shies off from any candid facing of the facts when such facts seem to involve the abandonment of comforting doctrines.

Religious "solutions" are reached too easily to have real religious power. If teachers of science are likely to overlook problems of personal adjustment, teachers of religion are equally apt to underestimate the importance of taking science seriously and truthfully. It is time for us frankly to admit that truthfulness requires our age to reconsider and probably to make somewhat radical changes in some of the time honored doctrines. Religious adjustments must be adjustments to the undeniable facts, not to rhetorical perversion of the facts.

Religion is not restricted to scientific material for the prosecution of its task. Religion is concerned to enhance and ennoble the inner personal life of men. A good religion is a religion which helps a man to cultivate and maintain reverence for what is good, devotion to what is right, love for one's fellow men. While the spirit of truthfulness induced by science is essential to the best kind of religion, this alone does not constitute religion. Reverence and devotion are most profoundly experienced when the emotions are aroused by pictorial or poetical or artistic or symbolic presentations. The sight of our country's flag stimulates patriotism more potently than even the best treatise on political science. The story of the Good Samaritan makes every one admire kindness regardless of his sociological sophistication. The sermon, set in

the surroundings of worship, in a building architecturally suggestive, has a different emotional appeal from that of a lecture. The task of religion should be correlated with the fine arts quite as much as with the sciences.

Protestantism is just waking up to the fact that when religion becomes too much rationalized, it loses its power to evoke and cultivate the nobler emotions. There is a significant and widespread revival of interest in worship and the artistic aspects of religious services. Goodness must be not only explained; it must be presented in personal deeds, poetic symbolism, prayers of consecration, in order to seem glorious enough to demand our complete reverence and devotion. Indeed, it would seem that when the symbolism of religion is employed with a real understanding of its significance, it serves to attract people to religion, regardless of their scientific standing. That Protestantism should be turning in this direction is a hopeful sign. Perhaps if religion comes to be thought of as belonging to the arts rather than to the sciences, religious education will be more successful in cultivating noble emotional loyalties.

The traditional symbols of religion suggest relationships to a kind of world which is to a large extent discredited by modern science. The framework of these religious ideas is for the most part the picture of the universe as it was conceived before the advent of modern science. This planet was represented as the scene of a brief period of probation on man's part. His eternal destiny was to be located in heaven or in hell. The motives for good living were drawn largely from considerations of reward or punishment in that other world. Man's need of religion was based largely upon his alleged lost estate, due to the sin of Adam. From the condemnation entailed by his share in this fallen condition man was to be saved only by a specific divinely provided plan of salvation.

Those who are influenced in their

thinking by what the sciences say find the above picture of the universe incredible. In spite of the fact that the imagery of our hymns and the preaching of most popular evangelists keep alive this picture, it is startling to observe how rapidly and inevitably religious people are coming to take it for granted that we live in the kind of world which the sciences describe. The idea of hell has so far vanished that most Protestant ministers never think of using it in their preaching. Practical and psychological conceptions of right and wrong conduct are supplanting the theological doctrine of original sin. The picture of what awaits one beyond death is far less definite than it used to be. The motivation for religious living is frankly sought in the relationships of people in this world rather than in rewards and punishments in another world. The influence of the sciences in all this is unmistakable.

But when we turn to the standardized confessions of faith, hymns, and prayers, we find that these persist in religious usage as if there had been no such change in our actual apprehension of the meaning of life. The extraordinarily dignified literary diction of these traditional utterances is to a large extent responsible for their continuance. They are models of artistic excellence which we do well to study and heed. But the ideas which they embody are frequently such as to lead thoughtful persons to question their truth rather than to yield to their influence. And it is profoundly discouraging to those who are eager to unite the forces of religion in our day to discover that proposals for Christian unity meet their most formidable difficulties in the reluctance of so many devout men to abandon symbols which are stumbling-blocks for modern minded persons.

The most important task for religious education today is to encourage and promote the development of ideas and symbols competent to ennoble the good life as it must be lived in the real world. If

I am not mistaken, this task calls for the literary and poetic and philosophical (in the large sense) temper rather than the technique of the scientist. Science must perforce be precise and analytic. It is compelled to invent technical terms in order to get away from the vagueness of popular language. A discussion of the religious life by a psychologist or a specialist in pedagogy almost inevitably employs abstract and technical terms to describe processes and attitudes which in experience seek quite different expression. What would a psychologist do with the self analysis of a young girl who had found a great joy, and who said: "I went upstairs feeling as if a thousand birthday candles were all lighted inside me." A statement like that carries the emotional quality of an experience as no amount of scientific analysis can. The imagery of the old hymns and liturgies was admirably suited to stimulate real religious experience so long as men thought of themselves in terms of the older theology. We desperately need religious utterances which reflect what we believe to be true concerning man and his world, and at the same time suggest the emotional and ennobling significance of those truths.

It would seem that here is a field which has scarcely been touched in our modern schools of religion. The training schools for religious leaders have been making most commendable progress in providing for the scientific study of religion. The quality of critical scholarship in the biblical, historical, theological, and pedagogical departments of our best seminaries is quite on a par with scholarship in other departments of a university. But this scholarship, like any scientific discipline, usually stops when it has precisely ascertained the facts. The intellectual understanding of religion is admirably provided for. But as yet there is little appreciation of the fact that religion at its best furnishes a noble esthetic interpretation of the meaning of life. Religion at its best

brings poetry and music and pageantry and adoration into the life of men. Growing religion is always creating these characteristic means of expression.

There is a rapidly growing hunger on the part of overrationalized Protestantism for what is somewhat vaguely called an "enrichment of worship." When this desire is felt, the easiest pathway to its satisfaction is recourse to the wonderful literary and musical creations of the days when a widespread religious social consciousness led to the production of those forms of worship and of music which are rightly arousing our admiration today. It is easy to be so impressed by a great liturgical or musical form of worship that we overlook the ideas embodied in the poetry or the sonorous utterances. But these ideas are, for the most part, the logical and effective expression of the mediaeval spirit. Doubtless there will always be those who can honestly employ them.

But, speaking as a Protestant, believing as I do in the importance of my Protestant heritage, I feel that what is supremely needed is a group of scholars who know the field and the meaning of the personal emotions and loyalties involved in modern religion as well as the biblical scholars know their field, and who will help to bring to self consciousness the socially shared aspirations of those who have burned the bridges of pre-scientific theology behind them, and who want the meaning of religious living in the modern world to receive its due literary and esthetic expression. Scientific technique as such cannot help us here. But the poets and the musicians, and the producers of pageants are with us in increasing numbers. If once they shall intelligently see so noble a goal as that of giving to modern religious experience a language adequate to its ideas, and forms of worship compatible with the attitudes towards reality which we must honestly take, we may hope for more direct and wholesome consecration

in the place of the puzzled and critically dissatisfied attempts at worship which confront us today.

In short, if the above analysis is correct, religious leaders cannot look to the scientists to help formulate the meaning of religion. The scientists are rapidly compelling us to face the facts concerning the world in which we live, and concerning the processes which make up our personal experience. A modern religion must enable people to live nobly, while facing the undoubted facts. But religion

is concerned with the *art of living* rather than with an analysis of the processes. A religious philosophy of life will present the challenge of the world in such a way as to enable men to devote themselves whole heartedly to the good. Religious practice will furnish esthetic means by which men are enabled to feel deep shame and hatred for what is base, and to confess the divine glory of the good to which they long to be dedicated. In the last analysis, religion is an art rather than a science.

II

RELIGION AND SCIENCE—A NEGATIVE AREA OF THE CONFLICT

ADDRESS OF PROFESSOR EDWIN E. AUBREY*

PROFESSOR SMITH has struck the keynote of the problem in his emphasis on symbols. It is the task of the religious educator, he says, to discover and suggest symbols which shall enable religious people to live in the real world which the sciences are revealing to us. This is a tremendous challenge, but it is not beyond our power to accept, when we have seen its implications. The function of the symbols is to be achieved when they are made to reinforce loyalties and to give satisfaction. But by what process is this achieved? Here we have the center of the problem; it is the worship experience. For what is worship but the efforts of a congregation to grasp the power which its religious symbols offer for the enrichment of life?

I

Five years ago Professor Coe pointed out¹ the danger of a form of worship which provided merely an escape from the real world of daily experience. The obvious alternative is to find worship forms and symbols compatible with our increasingly scientific temper. The former tendency is present in the Anglo-Catholic movement in the Episcopal

Church, with its enhancement of non-naturalistic features of the liturgy. The latter trend toward scientific criteria of value is to be witnessed where we might expect it, in the vanguard of scientific realism on the college campus. City and rural churches deplore the general decline of public worship. Colleges have been forced to abandon compulsory chapel. The collegiate movement for voluntary chapel was based on the complaint of would-be worshippers that student antagonism destroyed the atmosphere of worship and rendered the services of no religious value. On the other hand the "antagonists," where they were not merely transferring to official leaders of chapel worship their opposition to authority in general or merely following sheepishly a dominant rebel, were convinced that it was all mummery, traditional practices devoid of meaning. Among other colleges, Vassar was affected by this movement and, in the fall of 1926, discontinued compulsory attendance at chapel.

The following spring a survey was made to ascertain how the voluntary system was working and what changes in the service seemed desirable (for, with compulsion removed, chapel had to stand

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1. In the *Journal of Religion*, vol. II.

on its own merits!). A questionnaire was carefully distributed by the Christian Association to the entire student body, and returns were gathered in from 856, or 76.6% of the students, an unusually high return. The survey revealed that, of those responding, 42% never attended evening chapel. A question regarding the forms of the service of worship brought out very clearly the student beliefs that the most valuable features were: diversion from the day's work (55%), quiet interludes of music (57%), active participation in hymns and prayers (57%), silent prayer (39%), and a familiar, set order of service (30%). The emphasis on diversion and relaxation is significant. Apparently, worship is regarded as an escape from the pressure of daily work and the strain of campus activity. We all appreciate the significance of such a pause at the twilight hour, but it is also to be noted that the student leaves her scientific sandals at the door when she goes to worship. Leaving aside a host of other problems raised by the survey, let us concentrate upon this aspect of the question.

To gain further light on the problem I put this question to a small group of upper class students: "*In what ways has adoption of the scientific attitude helped or hindered your participation in public worship?*" Some felt that there was no particular relationship, since chapel was primarily a matter of quiet. Says one who seems to be typical of the questionnaire responses, "I go to chapel for fifteen minutes peace, change of scenery and for the music." Another says, "I have at times felt great power in public worship. . . The music or the personality (of the leader) or the youthfulness (of the group) have in each case been strong enough to bind us together and lift us out of ourselves toward the goal, but they have not been entirely natural . . . they are all something added." A third student writes, "I don't look at a

religious service intellectually at all, but merely from a passive emotional point of view, in which one symbol would do as well as another."

Others felt that scientific training spells the doom of ritual worship. "I find myself regarding the ritual as a distant show and questioning each phrase. It is an attitude which prevents whole-souled merging of the self into the worship." Or again, "I do not feel I am being honest in entering into a service, the purpose of which I do not agree with. . . I feel entirely detached as though I were watching prayers to an idol. . . . Adopting the scientific attitude has completely taken away any emotional response I might have had."

To still others the effect of scientific training has been to emphasize the non-social, individual aspect of religious experience, rendering public worship rather unsatisfying. For example, one student writes: "The impossibility of finding a personal meaning in some of the symbols, and a total disagreement with the most commonly accepted, made it harder for me to participate in a service that made constant use of them. . . There was a later stage which was a realization . . . that the members of any body of worshippers are bound to differ anyway, and that since we are all seeking the same end, there is a distinctive social value in public worship. . . With an appreciation of the impossibility of an absolute value in religion of worship, and a social feeling, a community of interest, participation became quite possible and acceptable, though never very satisfying. . . The scientific attitude has, however, while justifying the value of public worship, thrown the emphasis in my religious life more and more to the cosmic and purely individual, as opposed to the social aspects of experience."

There is a more hopeful note in the response of other students that adoption of the scientific attitude during worship itself serves to enrich the value of public

devotions. "From the historical point of view," says one, "the scientific attitude makes it easier for me to participate in public worship, for when the minister reads a passage . . . the beauty and splendor of the great sweep down the ages are realized and appreciated." "For me," says another, "the application of a scientific viewpoint in public worship has made participation temporarily harder at times, because it meant applying my experience. . . as a test of the meaning of some of the symbols used, and in some cases my experience seemed to deny the common meaning accepted. This brings me against the necessity of finding my own meaning, and when I have done that the thing is much clearer and stronger than before the whole process began, and consequently participation in common worship is eventually made easier and more vital. . . A lessened effectiveness may result. This may be even when a new meaning has been found and accepted, because the new meaning may not offer as moving a ceremony as the discarded one used to."

These testimonies reveal an area of maladjustment sadly neglected by religious educators. With one aspect the preceding speaker has dealt in his plea for symbols which keep the worshipper within the scope of scientific facts. There remains, however, a problem of psychology which is still more subtle. Does the critical attitude fostered by scientific training render impossible participation in public worship? Do we face here a clear differentiation of psychological responses into two types which cannot exist in the individual at the same time? To broach this problem we must first indicate the differentiae of the worship and scientific attitudes, respectively.

II²

Worship may be divided into two aspects; rites aiming to produce some ef-

fect on the Deity, and rites designed to induce some mood or attitude in the worshipper.³ The significance of worship, in either case, however, lies in the activity of the participant. Even the sacraments are for men; they are means of grace.⁴ In what, then, does this participation consist? May I suggest four phases?

In the first place, the worship attitude is one of appreciation. By some—Rudolph Otto⁵, for instance—this appreciation is immediate and non-rational. It is the rapture of what he calls the *mysterium tremendum*: The awesome, overpowering, urgent sense of immensity, coupled with the fascination induced by the strange, "wholly other." It is significant, however, that Otto in his description of this experience refers to its component factors as the gigantesque, found in the high-vaulted arches of a Gothic cathedral, the darkness augmented by a flickering light; silence enhanced by faint sound, and emptiness with empty spaces. None of this is rational, it is sheer appreciation in its purest garments. To the psychologist this analysis indicates the mechanism of narrowing attention. There is not utter darkness but a faint light, not complete silence but the reverberation of a last hushed note, not sheer void but empty distances between an object and its surroundings.

Accordingly, we may consider worship in terms of suggestion. If this narrowing of attention is one basis of suggestibility, the other is reduction of personal inhibitions. This latter, however, operates through narrowing conscious attention as described above. Under such conditions, the control of acquired habit—mechanisms which do not respond to the limited stimuli—is relaxed, thus giving rise to non-rational selection of responses. This is why the early associations of various religious gestures and symbols are so

2. The points raised in the remainder of this paper are more fully treated in a forthcoming article in the *Journal of Abnormal and Social Psychology*.

3. J. B. Pratt, *Religious Consciousness*, page 290.

4. T. G. Soares, art. "Worship" in the *Dictionary of Religion and Ethics*.

5. *The Idea of the Holy*.

important for adult worship. They constitute a fund of subconscious reaction-patterns upon which to draw. If the more recently acquired scientific habits can be temporarily dissociated, the worship experience may proceed unaffected and uncriticized. For the same reason, worship symbols which are not in harmony with other collective ideas of the group, or which fail to make positive contact with them, cannot sustain common appreciation.

This indicates the third aspect of worship attitudes which I wish to note. Symbols of worship must be symbols of values common to the whole group. The totem is the historical example par excellence. Worship becomes sharing in the common values. Many social values antedate the individual and do not owe their existence to his consent; they are simply accepted.⁶ They are transmitted as emotional, rather than intellectual, symbols, they stand for certain undefined experiences which the race or group treasures. It is precisely this common affective meaning which gives these symbols their dynamic quality in life. But where religious symbols fail to create the corresponding attitude in the individual the difficulty is due either to the fact that the dominant wish of the individual is not fulfilled by the symbol, or that it suggests to him a contradictory reaction, as in objectionable shibboleths, aesthetically distasteful liturgy or irritating music. In such cases the would-be worshipper is divorced from the social bond, he is no longer a participant in the group.

In the fourth place, worship may be viewed as self realization of the individuals comprising the group. The value of the symbols is their meaning in his experience; they are a part of his personality in so far as they stand for experiences he has had. The invocation may have the vague affective meaning

of a mother's reassuring handclasp as the worshipper in childhood found release from the awkward hush of the prelude; or it may have a wealth of meaning as he comes from wrestling with racial bigotries into what the invocation calls "a house of prayer for all peoples."

Such then is the attitude of worship. It is appreciative, it is suggestible, it is essentially a sharing of common values, and it is realization of the deepest self.

III

Over against this stands the attitude of scientific criticism. Description of this need not detain us so long, since, precisely because it is self conscious, it is more easily understood. It is, first of all, analytical. It seems to break up the synthetic judgment of appreciation into its several parts, the better to examine them. When the symbol is treated analytically it loses its emotional unity and becomes a collection of meanings. But these meanings are derived from setting the symbol in different lights; its relation to philosophic systems, to aesthetic standards, to the very technique with which it is presented to the group. Here clearly the participant has become an observer, and the attitude of objectivity has entered.

The critical attitude is, then, objective; it compares the object with others, and this process extends to all the possible comparisons in what we call thorough thinking. The symbol becomes one of a class or category, or else is treated with suspicion. In either case its hold upon the worshipper vanishes under his cold scrutiny.

And, as we have already said, the critical attitude is self conscious. When the symbol of worship becomes an object of analysis the observer becomes separated from the worshipping group, he becomes conscious of the distinction between them and himself; he becomes self conscious. Inhibitions result which break down "whole hearted" worship, and these

6. Lévy-Bruhl, *Les Fonctions Mentales dans les Peuples Inférieures*, page 1.

inhibitions beget deliberation, the antithesis of suggestibility.

IV

Surely these two attitudes seem mutually exclusive, and without hope of fusion. But is this really so? As a matter of fact the attitude of participation itself involves certain elements of detachment and reasoning. Thus Otto recognizes that the "numinous" tends to attract meanings derived for social experience which give it ethical content.⁷ And Hocking's declaration that since worship is a form of self realization, self evaluation is a form of love of God: and surely self evaluation is a critical, conscious attitude. One need scarcely refer to the insistence of aestheticians that critical understanding is necessary for appreciation of art. So also a religious symbol, as my student indicated, is enhanced by comprehensive evaluation based on analysis. How true it is that many young intellectuals fail to see the fullness of the religious symbols because their attention is limited to one particular basis of appreciation; the *modernist content* of a sermon, or a hymn or the text, or some particular personal criterion of beauty for the liturgical form.

On the other side, scientific thinking includes the participant attitude. Philosophers insist that the very act of knowing involves identification of the knower with the object. This is especially true of the knowledge of social objects. Further, all scientific discussion proceeds, as Sir Robert Falconer indicated last night, on the basis of facts. But what are facts? Are they not areas of common agreement, the ultimate foundations of which are not subjected to scientific criticism, but used as assumptions for the practical laboratory work of experimentation? That scientific research records its "happy inspirations" and its moments of exaltation should not be forgotten. And even the severely exact terminology of science retains a subtle emotional color-

ing, and the most abstract signs have some degree of personal reference. . . "Complete inhibition by an absolute exactitude (if we could have it) would hinder scientific transmission."⁸ Science also has its folkways.

To what extent, then, can these two attitudes of worship and critical analysis, which seem to be not mutually exclusive, actually reinforce each other? May I suggest six ways for such cooperation?

1. Critical analysis will serve to make clear the relations between religious practices and the social consciousness; and thus enhance the interests of both.

2. Self conscious thinking will help to maintain flexibility of individual religious attitudes and thus enable religion to grow with experience and vitalize individual conduct.

3. The analytical recognition of individual differences of interest in the worshipping group will increase the solidarity of the group on the basis of an exchange of experience as a road to harmonious interpenetration of differences.

4. The critical participant-observer will see certain deeper forces within the group which hold it together despite the superficial differences that alienate the casual observer. What might not a grasp of the functional value of historic creeds do to undercut doctrinal animosities!

5. The experience of participation will be enriched by occasional detachment, in the same way that the value of an ideal is enhanced by lapse of attention into consideration of the actual. Critical appraisal of group activity may well lead to a common search for the ultimate validation of its program.

6. Finally, the values around which the group attitudes are organized will be kept vital, and new values created, by what Coe calls the revaluation of values through critical intelligence. Thus will develop a deeper reverence; and, with deeper reverence, praise.

7. *Op. cit.*, page 115.

8. C. A. Dawson, *The Social Nature of Thinking*, page 163 note.

NECESSARY CHANGES IN SCIENTIFIC AND RELIGIOUS ATTITUDES AND CONCEPTIONS

I

MUST RELIGION CHANGE?

ADDRESS OF RABBI SOLOMON GOLDMAN*

IN THE generations immediately preceding our own, man boasted of knowing everything, or at least of being on the road to perfect knowledge. In Herbert Spencer we find a striking characterization of the *Zeitgeist*. The great synthesist was wont to attribute the smoothness of his brow to the fact that he had never been puzzled. It was a time when lecturers found delight in regaling innocent and receptive audiences with accounts of the intellectual frailties and imperfections of by-gone ages. The mistakes of Moses were carefully recorded and shouted from the housetops; Job's humility before the omniscience of God became the object of contempt and derision. *Homo sapiens* was on a rampage of logical proof and empirical precision. To maintain that there were "wonders" beyond man's ken was the convicting heresy. Syllogisms, postulates, and laws were formulated with a preciseness that old Occam might well have envied. The millennium, at least in the realm of the intellectual, was in sight.

The learned masters of theology were frightened. Theologians always are uneasy because they are never quite sure of their ground. That is one reason why they are always so intolerant. Those who have something to conceal naturally object to being searched, and when was there a time when dogmatizing divines did not have to screen an hiatus or two? When the fruits of the "scientific" approach began to metamorphose their well ordered and self sufficient environment, consternation filled their camp. Whereupon they resorted to their bag of old

tricks, seeking to halt the nusus of speculation with anathema and excommunication. When that failed, they girded up their loins and produced ponderous volumes of indifferent learning. As these volumes piled up vertigo was the result.

By some generous diagnosticians it was described as "the conflict between science and religion." Partisans on either side fought with an overweening arrogance. Each side boasted that it was in the possession of the only key to the portals of ultimate knowledge. Victory naturally went to the general that offered rich spoils to his aides-de-camp. The fairies of the theologian's promised land were able to offer little competition for the plenitude of "real" toys that were tumbling helter-skelter from the scientist's bottomless sack. Some bystanders, however, began to realize that the scientist had scored a Pyrrhic victory.

For what after all, these reflected, did science bring that was indispensable? Did it help the individual to feel "at home" with the universe? The discredited alchemists were wont to say that "everybody must try to get two things, eternal bliss and earthly happiness." They were thus modest enough to send man to the theologian for a visa to the kingdom of heaven. The modern scientist seems to have lacked that sense of humility. He has seemed to convey the impression that he was leading "through science to God." God was not exactly the goal; as a matter of fact he was unceremoniously dethroned, but gods or no gods, eternal bliss and earthly happiness all might expect.

There were many, and it is presumed

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there still are many, who were ready to dispense with the former to enjoy with more avidity and concentration the latter. But unfortunately the proteges of science felt betrayed.

"We are beginning to see," reflects a modern philosopher, "that material progress may go on for a time coincidently with mental and spiritual retrogression. . . . If we define social progress as consisting in the increase of the knowledge of the facts of physical nature and their correlations, improvements in instruments for the study of physical nature, and of machines for the manufacture and distribution of physical things, increase of social records, multiplication of poor books and magazines, and the wide-spread dissemination of odds and ends of information and misinformation of 'facts that aint so,' and of wild theories, then there has been and is still going on great social progress in the modern world, especially in these United States. But these things do not constitute social progress in a spiritual sense." (Leighton.)

This sentiment finds echo wherever men are seriously concerned with the business of living. On the whole, man is repeating today the immortal words of Faust:

"Habe nun ach! Philosophie,
Juristerei und Medicin,
Und leider auch Theologie!
Durchaus studiert, mit heissen Bemuehn
Da steh' ich nun, ich armer Thor!
Und bin so klug als wie zuvor."

To the modern man science was his Helen, but alas she offered only fleeting bodily delights. The radio, flying machine, submarine, mechanics and technology multiplied and increased, but eternal bliss and earthly happiness still remained beyond his reach.

But if in the physical world science had offered man at least something tangible, in the intellectual realm it left him hopelessly confused and sorely disappointed. He was conducted by science and philosophy through a labyrinth of speculations, guesses, postulates, and laws, and left whimpering in a blind alley.

"There are some among the traditional problems of philosophy, we were disconcertingly told but yesterday, that do not seem to me to lend themselves to intellectual treatment because they transcend our cognitive powers. . . . Vagueness, in particular, belongs, in some degree, to our human thinking; we can diminish

it indefinitely, but we can never abolish it wholly." (Russell.)

This simply means that science and philosophy, thus far, do not offer an adequate explanation of the universe, or a tractable conception of matter, or a real understanding of the life process, and in spite of Herbert Spencer, there is still much to perplex us. There are many theories, one perhaps as rational as another, but none with which effectively to disarm the cynicism of the nescientist. And yet theologians spent so much heat and energy to convince the ordinary man that their dogmas were as precise and as ultimate as the laws of science and the postulates of philosophy. Spiritual men such as the Spinozas, the Shelleys, and the Lincolns, who saw through this "reasoning" and refused to accept the resulting congealed creeds, were declared to have no share in God. Thus some of humanity's noblest characters were proclaimed the enemies of religion.

Aesthetics has had no theologians to make the attempt to coerce beauty and sublimity into a strait jacket of dogmatic definition; there was no Thomas to unload himself of cumbersome ontological proofs for its existence; there were no stereotyped formulae invented to express the ineffable, exquisite joy one experiences on seeing Beauty; no pulpiteers to offer banalities in its name and in its behalf. Therefore has beauty not perished, neither has it made enemies. There are those whose souls it has penetrated, making them its eternal slaves, who lie at its feet rapturously murmuring, "A joy forever." In many it served to stimulate lofty thought and noble sentiment; many remained indifferent to its charm, but it made no enemies and caused no conflict.

Theologians were not satisfied that God is; that human beings in all ages cried out to him from the depths and sought his light and encouragement in the valley of the shadow of death. They speedily acquired the shibboleth of the scientist's laboratory and the philosopher's ivory

tower, and succeeded in burying spontaneous religious sentiment under a cloud of words. They sought to prove that which was either beyond proof or needed no proof. They invented whole cosmologies and epistemologies to verify the simple declaration, "I am Yahveh, thy God," an expression of an intuitive sentiment that stands in need of no scientific verification for the mere reason that it posits nothing that is capable of empirical demonstration. "I am Being, thy strength, the Eternal," or perhaps, "I, Joy and Sorrow (According to some biblical scholars *Yahveh* is the combination of the ejaculation *yah* for joy and *veh* for sorrow), Good and Evil, am thy Eternal." This vague assertion has filled millions with awe, not only with fear. Hundreds of generations of men have given it homage, fought battles, built churches, pronounced prophecies, chiseled marble, painted canvases and wrote poetry. If this does not prove its validity, then let who will prove it otherwise.

Theologians failed to understand that science with all its pretensions has no law, at any rate concerning ultimate reality, more convincingly established.

"Imagine if you can," says a scientist, "two types of particles, each indivisible and infinitesimal in the ordinary (sic!) sense of the words, indeterminate in form and substance. For one type, wonderfully enough, we know the name 'electron.' . . . for the other . . . arbitrarily adopt the word 'proton' . . . Electrons pellate, protons pellate, but the electrons and the protons tractate." (Mills.)

Perfectly clear and convincing! *Quod erat faciendum*. But hold back,

"Owing to two German physicists, Heisenberg and Schroedinger, the last vestiges of the old solid atom have melted away and matter has become as ghostly as anything in a spiritualist seance." (Russell.)

It is because theologians sought to bolster up religion with such definiteness that needless conflict resulted.

The speaker does not want to be misunderstood. He is not pleading that we abandon the scientific approach, to revert to the aberrant methods of traditionalism.

Religion has suffered altogether too much from extreme non-rationality and impulsive saltation in the dark. Its history quivers with the tragic accounts that spurious faiths demanded; its records reek with the blood of victims offered to Jabberwocks and Mumbo-Jumbos. Think of the spiritual monstrosities for which mysticism alone is responsible. And "Mysticism," a shrewd student of religion remarks, "is only the stressing to a very high degree, indeed overstressing, of the non-rational or super-rational elements in religion." (Otto.)

The speaker is well aware that the intelligence represented in the scientific method must serve as the lode-star of a progressive humanity. He recognizes the indispensability and the validity of the attitude it engenders, and is ready to accept on faith many of its conclusions. What he objects to is, on the one hand, a one sided intellectualistic rationalistic interpretation of religion; and, on the other, the demand for such convincing evidence in the realm of religion as science, and particularly philosophy, are unable to produce in their respective precincts. If these latter must frequently seek support in the metempirical, how can religion, which projects the imagination into the "tangled wilderness of the unknown," escape it?

The speaker objects even more to arrogant dogmatism wherever it shows itself, be it philosophy, science, or religion. There is as yet no firm ground for laws and dogmas; we can only record descriptions and at best formulate hypotheses. The only acceptable creed seems to be, "Concerning ultimates, we humbly admit we can only guess." Let the human intellect busy itself as it undoubtedly will and give us more guesses and hypotheses, but let us remain free and open minded. Curiosity is a primary attribute of man and forever will he seek to probe every nook and crevice of space—or is it spacetime? If he should discover an hypothe-

sis that will effectively destroy an idol, so much the worse for the idol; the sooner we abandon it the better.

We must not forget, however, that only to some few minds will it be vouchsafed to consort with Betelgeuse or protons. The bulk of humanity is destined to live in a world of common sense "reality." In modern science matter may have lost its solidity and substantiality, and have become a mere ghost "haunting the scene of its former splendours," but in Philadelphia, Bombay, London, and Paris man will not eat his dinner on invisible electrons but at tangible tables; he will not mate with protons, be they ever so positive, he will seek woman in the flesh and blood; he will not be thrilled by imaginary waves of electromagnetism, but will swoon at the echo of an overwhelming symphony; he will not fall on his knees, if he fall at all, and worship a Primary Cause, but will bow down to the voice of God, whom generations of men have vested with personality.

This is the real world in which man will continue to live, work, play, make love, advance science, and produce art. No amount of theorizing will make any perceptible difference in this relation between man and the material universe. Neither will invention and discovery affect the situation. Civilization may enrich the body with appurtenances but will not alter its structure. Lindbergh travels much faster than either Napthali or Pheidipedes, but it is not exactly Lindbergh alone that is accomplishing the feat. It is "we."

But the moment we consider man even superficially in a common sense way in his relation to his environment, we are struck by a most disconcerting paradox. Although he is steeped head over heels in this material universe, although he is constantly dealing with things, in moments of leisure, in those moments when he is released as it were from the pressure and contact of the tangible, he views them almost with contempt—at any rate he re-

gards them as secondary, as dispensable, almost as a hindrance. It is in these moments that he becomes almost apologetic about the whole mundane business. He then considers himself something vaguely different and apart from everything about him. He thinks of himself as wholly within and holy therein. He may recognize his structural relationship with the anthropoid, but "innerly" he feels himself pertaining to a world apart. He understands that the dog is more akin to him than the rock. The animal, he then muses, is sensitized matter; but as for himself, matter is only his integument. He is a person, a something sounding through that part of him which his friends can see and touch. He is a personality.

Fortunately he is not a behaviorist. He does not begin with his neighbor; he is old fashioned and introspective and because he is introspective he will not permit a thousand Watsons to reduce his personality to a mechanistic theory. He knows that there survives in him a reverence for authority from his childhood and adolescence; he is, alas, fully aware of sex in its "modern psycho-pathological" sense; he knows in a vague way that he is an organism with many parts and many functions to perform, but he also recalls that Watson never recommended one machine to observe the other. He is happy to learn that his nearest kin in the animal world has "insight," especially since this new honor bestowed on this relation hits behaviorism on the head; happier still that it was Koehler and Yerkes who were the hosts to the chimpanzee and not vice versa, or the learned gentlemen would have been extremely emphatic about their hosts' rather unpleasant lower instincts. He admits that he too has them and is often their slave, but then he knows that he *has* them and is painstakingly laboring to refine them. His reward has been colossal. A little boy is born in San Francisco and with his tiny fingers sets the world afire. This is an accident, a freak, a prodigy, but *mirabile dictu*,

these accidents fill the pages of his history, so in all humility he again searches within and ecstatically rhapsodizes:

"I am that which began;
Out of me the years roll;
I am equal and whole;
God changes and man, and the form of them
bodily;
I am the Soul."

What is that intangible, non-existent, hypothetical soul or spirit or personality? But whence come those feelings which we describe as aesthetic, moral, religious? What were the physiological stimuli that made the Psalmist marvel and question: "What is man, that thou should'st think of him?"

What is a mortal man, that thou should'st heed him?

Yet thou hast made him little less than divine."

This knotty puzzle who shall unravel for us? "Where is wisdom to be found, and knowledge, where does it abound?"

The moment man emerged from animality he became ill at ease, puzzled, self insufficient. His whole subsequent history is a mad effort to find calmness, readjustment, peace. But he remained self insufficient and this feeling of self insufficiency was at the basis of all he created. For his mechanistic self the material universe was all satisfying, but self insufficiency led him to create an idealized world. He was in search of a "completely satisfying life."

It is in this quest that not only religion lies, as was observed by Professor Haydon, but the God idea too. Bread came from the earth; rain from the sky; wine from the grape, but where did songs, poems, wisdom, a sense of awe, creativeness—where did all these come from? What was the source of his idealized world? He is still in search of the answer even though it has been answered a thousand times in a thousand different ways. It was said to come from Manitu, Marduk, Yahveh, Zeus, Nirvana, that which always Is (Plato), the prime mover (Aristotle), Being absolutely infinite (Spinoza), the non-existent (Leibniz), The Eternal Power (Huxley), the Veiled

Being (Wells), the Emergent Quality of Deity (Alexander), the Principle of Concretion (Whitehead). Perhaps as good a solution as any is that it came from nowhere.

These answers were not only intellectually satisfying to many, they poured into the veins of the common man delicious ichor, for men need fixed points to which to attach their thoughts and their life. The empirical agnostic remains a puzzle. He accepts so much on faith, why does he stop short? The mechanist has never convinced him that he has exhausted the essence of reality. He has, it is true, more or less adequately described appearance, but he has failed to penetrate beyond to touch its secret. At any rate, he has not made him self sufficient. Man has remained incurably self insufficient. The more science has given him, the more it stimulated him. It did not satisfy him. It has left untouched "the awful ultimate fact which is the human being," "*der Mensch an sich*." For after all science is a method, a technique; what man is after is result, achievement, source. He is in search of a fixed point, and this fixed point is transmogrified into a god. Man is man, he cannot escape his experience or suppress himself. He hypostatizes. He remains religious, he is in search of Personality in the universe, of God.

How ludicrous have been the attacks on prayer, and yet who but the religionists are responsible? The literature of prayer is rich in solemn, ecstatic, awesome expression; it is as rich as the poetry of the world. Why, then, such marked hostility to the former and such a passionate love for the latter? Because religionists prescribe the same prayers for all people at all times. Religionists insist on the incarceration of the restless groping of a self insufficient man in unchanging ritualistic formulae. Man prays because he is self insufficient. How, then, can he respond to a fixed ritual?

Religionists will argue that such a conception of and attitude toward prayer

may do away with public worship. Not necessarily. Do we not read poetry in public? Is not our best music relished by huge masses? I do not recall a painting picturing a poet reading to one person. I cannot imagine a Beethoven Concerto having the same sweeping force and penetrating influence if played to an individual. Man's self insufficiency is most keyed up when he is in intimate contact with other humans. He is never so lonely as when he is in a group, because then his desire to be "at home" with others, with himself, with the universe is strongest. If those who arrange services will understand this yearning and devise a technique to grapple with it, few pews will ever be unoccupied.

Public worship, too, will forever remain with us even as public assembly. Even though man does not seem to have come into the world "outfitted with any innate quality of sociability," his history has made him more a societal being than he is an individual. He can no more escape his group than he can forget himself. Survival was the achievement of the many and not of the one. The thoughts and

memories that link man to man "lie too deep for words." He may gossip about his neighbor and deride the masses, but he cannot escape the conviction that "society is greater than the sum of all its parts." In public worship, then, man does not only draw nigh to his Father in heaven, but to his brethren on earth.

The speaker is fully conscious of the shortcomings of his presentation. He knows he will leave few if any in this critical audience satisfied, much less convinced, but it is in the nature of the subject—it escapes finality.

This awful ultimate fact which is a human being is destined to live in a world of common sense even though modern science deny the existence of a material universe, and because of this fact man will idealize the material universe, thus intuitively expressing the truth of science. But being impatient, impulsive, self insufficient, he will want to embrace these scientific truths in a personality. This personality will be given many names. The less sophisticated will prefer to worship and pay homage to that represented by the monosyllable—God.

II

WHICH IS IT: RELIGION VS. SCIENCE, OR RELIGION VS. RELIGION?

ADDRESS OF PROFESSOR MARK A. MAY*

WHAT changes are necessary in the conceptions of and attitudes toward the physical universe, the human personality, and social progress, for the harmony of science and religion?

I think it can be said in fairness that religionists are more concerned over this question of conflict than are scientists. Here the R. E. A. is devoting an entire convention to a consideration of the topic. The magazine that it sponsors carries many articles in which the whole matter is discussed from many angles. Other religious journals are doing the same, and

other religious bodies are holding conventions for similar discussions. Contrasted with this, I have never seen in any scientific journals that I have read more than a bare half dozen articles on Science and Religion; I have never attended a scientific convention where the subject received much attention; and I have never heard of an assemblage of scientists called for its discussion. It is true that scientists have discussed the matter both publicly and in private; they have written on it, too, but usually in response to a request for their views. Many scientists are in their own ways deeply religious and rever-

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ent men. Some of them evidently keep their religion and their science in harmony, others keep the two apart, but none of them are willing to twist their science to fit the traditional concepts of religion. Religion must adjust to science if any adjustment is to be made.

The thesis which I shall try to maintain is an old and trite one. It is essentially this: Whether there is a conflict between science and religion depends on how they are conceived. It is possible to have a science and a religion that are in perfect harmony. Conflict may be avoided in two ways. One is for science and religion to remain wholly apart and deal with entirely separate events. But this is not practical. Another is for each to deal with the same events but in different ways, dividing the labor as it were. But even here trouble may arise over who is to cut the pie.

In order to see more clearly what changes must take place to effect a working harmony between science and religion, let us look briefly at the causes of the difficulty. The history of this conflict is too well known to repeat here. The causes of the conflict, I think, are in the main, three. First, conflict arises when science and religion offer opposing *explanations* of things, especially of the origin, nature, and destiny of man and the world. Geology offers one theory of the origin of the world, Genesis offers another; biology offers one explanation of the origin of man, Genesis another; psychology offers several explanations of the nature of personality or the soul, and religion offers others. Further, traditional science has asserted that every thing in the world, including man, may be explained in terms of *mechanical principles*. This mechanistic conception of life has been a red flag to religion. Science has "explained away," complain the religionists, the miracles of Jesus, the first chapter of Genesis, and even the human soul. Hence a major part of the trouble has arisen over *conflicting explanations*.

A second type of conflict is over means of social control. Traditional religion has contended that social control is best achieved by indoctrinating the youth with a body of biblical truth, that thinking must be controlled. Science contends that the best social control is achieved through freedom of thought. This was the real issue in the Scopes trial. Traditional religion has for many years been skeptical of, if not openly opposed to, too much learning. If learning there must be, it should be carefully guarded. The youth must learn the right thing in the right way. Science has always opposed this attitude.

A third type of conflict arises out of the interpretation of the values or the goods of life. Science takes nothing for granted, but insists on exact knowledge; religion, however, insists on faith. There is, to be sure, a certain faith in all science and a certain knowledge in all religion, but they have different values. The Greeks believed that knowledge alone is virtue. It has been charged that this scientific knowledge takes the mystery and the beauty out of life, that science saps life of all that is worth while. This conflict over values is rather recent and somewhat subtle, but nevertheless represents, I think, the basic cause of the conflict.

Let us consider now some changes that have already come about in science that greatly affect its relations to religion. It happens that these changes are such as almost completely to dissolve the conflict between science and religion, but they have not come about through any efforts of science to accommodate itself to religion. Roughly speaking, the change is from the traditional, or Baconian conception of science, to the more modern or critical conceptions. Modern, or critical, science differs from the traditional, in respect to method, problems, aims, and conception of its subject matter.

In point of method, Baconian science does not distinguish between controlled

laboratory experimentation and the observations of common sense. According to Huxley and Spencer, scientific observation is only a refinement of that of common sense. The facts of modern critical science are not the assertions of common sense. The essential difference is that the world of common sense observation is a world of values, while the world of science is a world of facts. The facts of common sense are such things as tables, chairs, earthquakes, marriages, and the like. These are not the facts but the subject matter of science. The facts of science are electrons, frequency vibrations, visual qualities, and the like. In a recent and very stimulating book called *Psychology as Science* Professor H. P. Weld gives a very lucid description of this whole transformation. (I am indebted to Professor Weld for much of this discussion.) For example, he says,¹

"When science takes its attitude toward the whole of experience, facts result. When, on the other hand, common sense takes its attitude toward the same experience appreciations, interpretations, values, result. . . ." And a little later, speaking of this new scientific attitude, he says, "When he (the man of science) finds, for example, no good drinking water or pumps, no locomotive whistles or red flags, no beautiful shade trees or gorgeous peacocks in science; he finds instead a synthesis of hydrogen and oxygen, a set of mechanical principles, auditory quality or frequencies of vibration, visual quality or radiant energy, and living organisms that possess biological resemblances to and different from thousands of other organisms; nowhere in science does he find any hint of utility, of beauty, or of worth. The confusion of the older writers about science resulted, therefore, from the failure to recognize the subtle shift in attitude which is characteristic of scientific observation."

This does not mean that science divides the world into two parts, one of value and the other of fact; it only means that the scientist as a scientist is concerned with facts and not with values, but as a philosopher or religionist he may assume the attitude of an appraiser or evaluator of facts. The distinction is an important one for the question at issue. It means that science as science is not concerned with

values, and will not quarrel over them. Scientists may evaluate but when they do so they are no longer assuming the attitude of scientists.

Another important distinction between traditional and modern science is in the attitude toward the fundamental problem. For Baconian scientists the chief problem of science is *explanation*, for modern critical scientists it is *description*. Francis Bacon preached the doctrine of induction, that is, drawing conclusions from a body of facts, and formulating laws that are valid for the facts subsumed. These laws were then used as explanatory devices. For example, the law of gravitation explains the falling of stones and objects toward the earth. In physics, wider explanatory principles were deduced. Such was the principle of mechanism. This principle attempted to explain all events in terms of their mechanical connections. In biology, two explanatory principles were evoked, one called mechanism and the other vitalism. Traditional psychology is literally beset with these principles. Such, for example, are instincts, memory, reason, and the subconscious.

Modern critical science has no place for such explanatory principles simply because they cannot be observed and experimentally verified. All that science can do is to describe what happens, or more exactly, what is observed to happen.

Science observes events in a time order, but unless the intervening time is very short, no causal sequence can be proved. Indeed, physics has given up the notion of causation entirely. All that can be observed is that B invariably follows A. But this does not mean that A causes B in the sense of forcing it to happen. Force is only an inference in physics and not an observed fact. Bertrand Russell has a lucid discussion of the whole concept of force in science in his late book.² He shows that the idea of force is strictly

1. H. P. Weld, *Psychology as Science*, p. 14.

2. Bertrand Russell, *Philosophy*, page 149.

anthropomorphic. It is largely due to the fact that we push and pull things and thereby experience muscular tension. The notion of force in astronomy has been abolished by Einstein, but we still cling to the notion here on earth. Physics knows no causes in the sense of necessary sequences. Bertrand Russell is of the opinion:

"Given any event, there are other events at neighboring places in space-time that will occur slightly later if no factors intervene; but in practice other factors almost always do intervene, and, in that case, the event which actually occurs at any point of space-time is a mathematical resultant of those which would have followed the various neighboring events if they had been alone concerned."

Another important distinction between traditional science and modern critical science is that modern science does not presume to predict the occurrence of events. It cannot, in the nature of the case, for physical laws are only statistical and never absolute, except perhaps for events in empty space.

The motive of modern science is mainly what Cooley calls the "contemplative" motive. It is knowledge for its own sake. The goal of traditional or Baconian science was knowledge for the benefit of humanity. While it is true that much science is still inspired by the helpfulness motive, much of it is motivated by the simple desire for knowledge. The latter seems to be the essential one in much of modern critical science. For example, as Millikin points out, Newton's famous formula that "force equals mass times acceleration" was born of the contemplative motive but has had a tremendous practical application. Every automobile, every engine of any kind, every dynamo, every power machine of any description, must take account of it. Hence the attitude of science is highly impersonal, objective and strictly factual. It has no place for values, explanations, or controls. It cannot possibly come into conflict with religion, not because it lives in another world, but because it views the world of

common sense as fact and not as value. It offers no explanations; it knows no necessary causes; it makes no predictions; it proposes no controls. All the things that concern religion and philosophy are left entirely to their care.

It is true that the scientist does not forever remain in this ultra-modern frame of mind. Being human, and having a variety of interests, he often lays aside his white apron, pushes back his instruments, and begins to speculate. Now he is no longer a scientist, but he has put on either the garment of the philosopher or the robe of the priest. His interpretations have greater popular prestige than those of the professional philosopher mainly because he is a scientist. His evaluations, interpretations, and explanations, are often, and indeed usually, in conflict with those of traditional religion. But the conflict is not between science and religion, but between different interpretations and explanations of the facts of science. Hence religion can have no conflict with pure science, only with another religion. Scientific psychology as scientific psychology does not conflict with religion, but the religion called "behaviorism" or the cult of Freudianism does conflict with the religion of Christianity, and perhaps with Buddhism and other religions. My only point is that the fight is always between the religions and never between any one religion and science.

In this connection it is interesting to note that the religionists have never felt any antagonism toward such men as Sir Ernest Rutherford, Niels Bohr, or the more modern physicists, Heisenberg and Schrodinger. Never, to my knowledge, has any attack been made on the late Professor Titchener. But such men as J. B. Watson, and S. Freud, have been bitterly attacked. Why? Simply because Titchener and Rutherford have stuck to their roles as pure scientists. Freud and Watson, on the other hand, have each started

a cult or a religion. It is a very interesting fact also that the "existential" psychology of Titchener has never given religion any concern. This, I think, is due to the fact that Titchener's psychology has approached a purely critical science more nearly than any other psychology known today. Professor Weld, in the book referred to above, shows that the problem of empirical psychology has been to furnish a theory of conduct and principles of causal explanation. It has been concerned mainly with evaluations and interpretations. The "existential" psychology of Titchener, Weld thinks, is founded on observed facts and controlled experiments. Its aim is to describe the facts of experience, but it offers no explanations of them. It has been criticized as being cold and barren and void of any "practical value." But this is one reason why it is pure science, and has never conflicted with religion.

This general point of view has been discussed vividly by Professor Knight Dunlap in the December issue of *The American Mercury*, where he shows that the conflict between the fundamentalists and the evolutionists is merely a conflict between interpretations. He holds that the evolutionary theory as a working hypothesis (and this is all that pure science claims for it) cannot possibly be in conflict with theology. He thinks the difficulty lies in the fact that many biologists hold the theory of evolution, not as a scientific hypothesis, "but as a religious doctrine." No one would deny the facts of evolution; the dispute is over what they mean.

C. E. Ayers, writing in the February issue of *Religious Education*, asserts that the scientists are not only prone to be dogmatic about the truth of their "pictographs," as he calls them, but that they also tend to "reach across into theology to pat Jehovah on the back, with kind words of encouragement and support from subatomic physics or bio-chemistry." Then he quotes Buchanan to the effect that

"Every month sees some new transubstantiation of atoms into angels, or of ether vibrations into soul, and evolution into Deity." The much-quoted poem of Carruth's, one verse of which ends, "Some call it evolution and others call it God" is more of the same effort. The quick efforts of certain scientists and theologians to pounce on the recent discoveries in physics which indicate that there are no such things as entities of matter and that the atom is only a ghost, and to capitalize these discoveries for religion, is a further illustration of the point. But God will probably never be seen through the microscope nor the telescope, nor will even the spectroscope reveal his presence. These are the instruments of science, not the devices of religion.

The scientist who claims to find God in his laboratories usually refers to the fact that he has found great and inexplicable mysteries there. From childhood he has been brought up, perhaps, in the traditional religion which identifies God with the mysteries of life. The biologist begins with a living organism in an environment. What lies back of this living organism, where it came from, he does not know. If he is of a mystical temperament, he is likely to attribute it to the wisdom of the Almighty; if he is of a skeptical nature, he is likely to say that no one knows, yet. When the physicist comes down to the point where the only strictly observable matter is either sense qualities, or radio activity, if he is like Professor Whitehead he may make capital out of it for religion; but if he is of the temperament of Bertrand Russell, he probably will not.

The changes, therefore, in science that are essential to harmony with religion have already come about with the shifting of the scientific attitude from the traditional Baconian to the modern critical attitude. But this does not mean that all possibilities of conflict are done away. There is still the conflict between the interpretations, and explanations, and eval-

uations, made by men of science, and those made by various religions. Such conflicts are, I think, inevitable.

Recognizing as we do that the present conflicts are not between the facts and formulas of science and religion, but between the religions, the theologies, and various and sundry interpretations of the facts of science, to ask what changes are necessary to reconcile these conflicts, is like asking what changes are necessary to reconcile Baptists to Methodists, or Anglicans to Roman Catholics. Mark Twain is alleged to have said that you cannot reform a Baptist, because as soon as he is reformed he is no longer a Baptist.

I am not even certain that it would be desirable to resolve all these conflicts and unify all the religions into one grand communion of the saints. What would it mean if everyone held precisely the same views concerning the physical universe, the human personality, and social progress? What effect would it have on further progress? Would it make any difference in the individual lives of men? The answers to these questions must wait until we know more about the relation of a man's theology or philosophy to his conduct.

If it is desirable to attempt to harmonize all interpretations and evaluations of life, to bring into one fold all denominations and religious sects, the place to begin is with the children. Little can be done to change the views and attitudes of the adult generation. Professor Kilpatrick thinks that the greatest and most unpardonable sin is that of indoctrination of the young. Strict Presbyterian parents bring their children up to be Presbyterians, atheists teach atheism to their children, and so on for all the others. Professor Kilpatrick finds in this early indoctrination the germ of later personal inner conflicts. It is such conflicts that we all wish to avoid. The story of the boy or girl brought up in the religious home and later thrown into a college or world environment where science holds

sway, and the conflicts and sufferings caused thereby is old and familiar. It is nevertheless a thing that we all hope our children may escape. How to help them escape it is a major problem in religious education.

Several proposals have been made recently by religious thinkers for the reconstruction of religion in the light of fresh knowledge and fresh science. The scientist is continually revising his hypotheses and interpretations. He is willing to shift his position with the accumulation of new facts. The opposite attitude is found in the fundamentalists, who are believers in permanency. Hence the conflict between fundamentalism and modern interpretations of the facts of science is that between permanency and progress. The modernists in religion recognize this and are willing to change. Some of them are quite willing to assert that truth itself is forever changing; not only are new truths being added, but many of the old ones now appear to be false. This means that religion must continually be rethought and reconstructed with every appearance of new facts. This, of course, precipitates another conflict between "the old-time religion" and the "up-to-date religion." We may now consider some of the proposals that have been made to bring religion up-to-date.

Professor Harrison Elliott in a brochure on the *Bearing of Psychology upon Religion* makes a plea for a religion based on the assumptions of a scientific, rather than a pre-scientific world. For example, science has completely abolished the dualistic notion of two universes, one natural and the other supernatural. Any religion built on this assumption is bound to get more souls into trouble than it will save. He points out that while it is the business of science to discover the facts, yet religion is tremendously interested in what facts are discovered because they must be taken into account in constructing a religion that will be true and consistent. "Instead of trying to prove any

psychology untrue and attacking the psychologist personally, as many ministers are doing, they should take the scientific findings and use them as they rebuild their faith." He further asserts that modern psychology does not make religion impossible or unnecessary, but rather furnishes the very foundation stones for it. The difficulties that many thinking people today have with prayer, worship, and the practices of religion, is that they think these on pre-scientific assumptions, while such things as health, hygiene, and even morals, are thought of against a background of science.

One of the most radical proposals is made by Wieman in his recent book, *The Wrestle of Religion with Truth*. His proposal is that religion take an out-and-out scientific attitude and become experimental. Among the opening sentences we have this:

"We believe that nothing has so persistently and effectively blocked the way to salvation as religion, because nothing has done so much to confuse and darken the discernment of cold hard facts. Next to religion, in this evil work, is art. And yet the concrete facts of most vital importance can never be discerned except by means of religion and art. Nothing can ruin life so completely as that upon which it must depend for its greatest good. For this reason, we pronounce religion the most horrible of all evils, and next to it art and science."

The penalty for this evil work is loss of vitality and the loss of the respect of the thinking world, which has come to religion during the last three centuries. As a way out, Professor Wieman proposes that religion come out boldly with the attitude of science and launch forth on a tremendous experimental enterprise the aim of which is to find God. He defines God in such a way as to permit an experimental investigation of his nature. God, he says, is that behavior of the universe, or that feature of our total environment, or that aspect of experience, which yields the maximum security and

increase of human good, or which is most beneficent, or which nurtures and sustains life and keeps it going.

His notion is that we begin with such a definition of God as a pattern of behavior and try by scientific means to find out its (or his) nature. What techniques shall we employ in this search for God? Not those of present day science because they are unsuited to the problem. Modern scientific techniques are mainly those of analysis; this problem calls for techniques of synthesis. The techniques of psychology and sociology will not do because they deal in parts rather than in wholes. The methods he proposes are the experimental methods of common sense, which involve an experimental living. Each man who enters the experiment will agree to stake his life on the experiment, because he who enters must stick it through to the end. He cites the life of Jesus as the most important religious experiment ever performed.

Already, then, we see certain important changes coming in religious conceptions and attitudes that look forward to better times. Religion is gradually abandoning the notion of supernatural control over the universe and man. It is true that the fundamentalists as well as the modernists use lightning rods, employ physicians, have radios, and in general find their daily wants supplied by science. These they gladly accept. Moreover, religion is abandoning fixed ideas in the matter of truth. It is becoming recognized that all truth was not at one time revealed and there is no more to come, but that rather truth is progressive. That is, there appears a definite evolution in religion, evolution in the sense of progress. Many other changes in both attitudes and concepts are daily taking place. It is clear that religion must change if it is to survive, and this after all is the important fact.

NECESSARY CHANGES IN RELIGIOUS EDUCATION

I

CHANGES IN RELIGIOUS EDUCATION MADE POSSIBLE BY NEW KNOWLEDGE

ADDRESS OF PROFESSOR HUGH HARTSHORNE*

RELIGION, mother of the arts, seems to have been abandoned by her offspring as soon as they have acquired an independent means of support in some science. The art of healing, once the prerogative of religion, has acquired the science of medicine, and deserted her old home. The arts of the drama, the dance, the song, of painting and sculpture, each in turn developed its own techniques and rules, in some cases greatly enriched by special modes of training and special knowledge of materials, and each in turn has emerged from the common home to make its own way. So also the sciences of politics and economics have deprived the church of certain age-old responsibilities and education, leaning on its own newly discovered laws and methods, has long since made its exit.

Just now, we are witnessing the courtship of the art of individual pastoral care and of individual re-birth by the sciences of psychology and psychiatry. There is every reason to suppose that this most cherished of church functions will also pass into the hands of specialists whose trained methods are based on science rather than on tradition. And last of all, determining for the people what is right and wrong, passing judgment on their acts and enumerating the rewards for good behavior or the punishments for backsliding are gradually being assimilated by social science, with the aid of psychology.

The church should welcome these marriages and elopements. No mother can continue to bring children into the world

and provide them with their early nurture who is obliged also to conduct all the affairs of her older offspring. Nor need we fear that the church's fertility is at an end. As with people, this is probably declining in proportion as civilization grows in complexity and in proportion as the death rate falls. The arts are increasingly vital. More of them survive. Fewer new ones are needed, and these can be more carefully brought up.

We need no longer witness such early deaths as the tragic end of the idea of sex purity, of Utopian bliss, of a co-operative commonwealth, of universal good will, of the evangelization of the world, of world peace and sobriety and many of the arts of living. These children of the church were badly brought up and never provided with an adequate basis in the stark facts of life, so that they could not survive in the struggle with such competing forces as untrained sex drives and organized vice, economic selfishness and organized industry, pride of race, intemperance and commercial recreation, for many of which the church itself was in part responsible through alliance with alien institutions and ideals.

From this long experience of the church three lessons may well be drawn. The first is that the church must expect the methods and institutions to which it gives birth to develop into independent enterprises. Far from playing the part of the jealous mother, she should welcome this enlargement of her resources. Second, before giving up a promising youth, such as world peace, or world sobriety, the church should equip it with

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an adequate scientific training and teach it to turn to facts for its support rather than to the reputation of its mother. Third, the church should find some way of maintaining cooperative relations with and among the arts which make for human welfare, instead of complacently allowing them to waste their energies in duplication of effort and in petty squabbles concerning which should be first among them.

Well, enough of allegories. Let us consider the work of the religious educator. It should be apparent that not all the work of religious education can be done by the churches. One of the first consequences of the development of a science of education was the lifting of a vast burden from the shoulders of the churches. But once this was accomplished the church let education secularly conducted go its own way and even now is scarcely aware of the educational experiences that are being provided by the public schools. The first task of the church is to seek not rivalry but rapprochement. I have no doubt that a careful analysis of the educational experiences of the children of any church would lead to radical changes in the church's plan of work—and it is equally true that if the peculiar function of the church were adequately performed, a fair appraisal of this work would also materially alter the program of the day school at many points.

Let us assume that this preliminary clearing of activities has been accomplished or is under way. The church school and other community agencies will still be at work. In what respect can new knowledge assist them?

NATURAL SCIENCE

Command of material resources. I must confess a personal preference for freedom from the burden of possessions, things. The machine can easily become the master. But such an individual preference can hardly be considered. The church which required all its members

to attend on foot rather than by auto, which provided hard benches for seats, and an unheated room, with poor acoustics, would not long survive without endowment. There are still many people, however, who would prefer such facilities to the richly furnished and luxurious palaces to be found on Fifth Avenue church property. But such a use of humble facilities must be a matter of policy, not neglect, and in general, the church which is able to command all available physical resources will, other things being equal, get the most accomplished.

There are many people trying to direct the educational work of churches without the most elementary mechanical equipment—telephone, mimeograph, automobile, a budget for postage, a card file, a storage cabinet, even a desk, with the result that high grade talent is being sacrificed on the altar of inefficiency. As steward of the time and talent of its helpers, the church is guilty at this point of criminal neglect, for all this waste means failure to make human contacts. I am not suggesting that the church adopt the dubious methods of commercial advertising and salesmanship, but only that it make some effort to get out into the world where people are to be found instead of contenting itself with the casual visits of those who happen to pass its doors.

Legitimate demands upon Sunday or any other holiday are made by health, both physical and mental. The auto provides the opportunity for millions. Why should the church stay at home? Retreats in the hills could be enjoyed nowadays by an entire congregation. In the old days, going to church was a sort of picnic. Everybody came and brought lunch. The proportion of preaching to baseball was probably distorted, but the day was a genuine holiday. With modern equipment for feeding large numbers, with modern methods of teaching, with

all sorts of devices for adding to the comfort and convenience of people in the open, it would be a simple matter for a church to conduct some of its regular religious education as part of a program for enriching the leisure of the community. Think what a blessing it would be if the recreational forces of a city should be controlled by persons who loved decency more than money!

Within the church building itself, what changes would take place once modern science were to take a hand! The economical use of space, the cleaning up of toilets—if cleanliness is next to godliness, most churches are a long way from heaven—the provision of equipment for carrying on educational activities—one could draw up a list of minimum essentials that are available today in only a handful of church schools—a thousand mechanical aids well known to the day school child but totally absent from his religious school.

PSYCHOLOGICAL AND MEDICAL SCIENCE

I couple these because time does not permit a complete presentation of the contribution of each. Indeed there is not space even to list what we might learn from these two basic sciences which have such large implications for human welfare. On the whole, the Sunday school, while erring in the matter of satisfactory conditions for much of the needed group activities of education, has been sound in its insistence that no teacher should have so many pupils that they cannot be individually known and dealt with. With a teacher of high character and fine personality the small class has meant untold opportunity for personal influence for good.

Recent experience has been teaching us how to make still better use of such personal contacts. The child guidance, mental hygiene, and juvenile court clinics have been developing techniques for correcting defects in personal adjustments and have gradually been piecing together

a theory of spiritual hygiene of the greatest import for religious education. It is an astonishing and somewhat disheartening fact that with rare exceptions this whole movement is *terra incognita* to most church workers, and on the other side it is equally amazing to realize the almost total disregard of religion on the part of the child guidance movement. Here is a case, surely, for greater cooperation.

If the church must give over to community clinics the work of personal reconstruction which has been her peculiar task, at least her unique contribution to the process ought not to be lost because of this flight of the fledgling from the maternal nest. But the time for such separation has not yet arrived and meanwhile it behooves the religious educator to get in touch with his local agencies and leaders in the mental hygiene of childhood and not only learn their methods but cooperate with them as far as possible. Only ignorance of the facts could justify lessons on honesty or punishment, or prayer even, for a young delinquent if the cause of his malefaction were some uncontrollable obsession. He may need, instead, less punishment and more recognition, less coddling from his mother and more companionship from his father.

To substitute prayers for scientific control is an insult to God, just as gold digging is an insult to friendship. If a child needs iodine, or glasses, or the removal of infected tonsils, the inspiring companionship of a fine teacher or contact with the great stories of the Bible will not avail. If Sunday schools are going to help individuals overcome their weaknesses and faults, their bad habits and anti-social attitudes, they must begin by diagnosing each case by itself, ferret out the causes of the malady, and then apply relevant remedies.

But the work of Sunday schools is not merely corrective. If properly done, it is creative. Its methods, therefore, must

be examined in the light of known psychological facts to see whether they are competent to the task in hand. If literature is to be used, is it comprehensible to those who use it? Experiments have shown that much of what is used is not within the understanding of the pupils. Furthermore, even when comprehensible material is used, it is used often to such ill effect that those who have been taught have no clearer grasp of it or of its meaning than have those who have never heard of it. Much dependence is placed on methods of conveying ideas and ideals which the science of education has learned to distrust because the results expected do not follow. Careful attention to the technique of teaching, as educational psychology is helping us to understand it, would mean a revolution in the actual work of religious education.

Since we all realize this, it is only fair to be more specific. I will, therefore, suggest ways in which psychological method is only within shouting distance of religious education.

First, definition of specific objectives, such as particular habits of thought or adjustment to be acquired, detailed information needed for realizing a high social purpose in action, characteristic faults—that is, behaviors contradictory of social and individual welfare—to be overcome.

Second, provision of the essential conditions for accomplishing these objectives so far as these are now understood, such as adequate, properly distributed drill on processes; whether chiefly mental as in thinking through moral problems; or largely overt, as in command of courtesies, helpful acts, suitable language, meeting difficult situations likely to lead to anti-social behavior; or largely emotional, as in removing fears and prejudices, establishing wholesome attitudes toward people, toward work, toward institutions, toward reality in general.

Third, there are, however, large areas of method the details of which are as yet

only guess work. Religious education, therefore, needs to carry on genuine educational experiments, with suitable controls, in order to discover and establish techniques for accomplishing its objectives. How, for example, is a high social purpose best achieved? Can it be conveyed by propaganda? Is it practicable to attempt to establish specific habits, such as honesty, or fair mindedness, apart from the integration of such achievements in a unified self? What is the function of literature, of discussion, of cooperative activity, of prayer, of music, of ordered worship in all these learning processes? Such questions as these wait for answer upon the establishment of experimental schools and experimental classes. Ideas about method are useful. Discussion of what has been "tried out," as we say, is important. But there is no permanent substitute for scientifically controlled experiment.

Fourth, to make practicable the conduct of such experiments, we need also the development of techniques for measuring those products of education in which religion is peculiarly interested. If in the nature of the case some are not measurable, this should not discourage us from attempting to measure those which are measurable. We need to remember, however, that our ambition outruns our achievement in this field and that far more than eagerness to apply techniques and tests do we need eagerness to do the long, grilling work required to produce and learn how to use such techniques.

SOCIAL SCIENCE

To philosophy and religion we must continue to look for the interpretation of life and the determination of life's goals. But it is to science that we must increasingly look for the discovery and control of the means for reaching these goals. It is not science which settles on the size and position of a bridge but the human needs it must serve—but science builds it. So our philosophy of

history and our religious insight take the facts made known by science and weave them into a cosmic pattern or direction of movement, and social science works out those laws and principles of human relations on which a growing social order can be built. Religious ideals of behavior have worked in proportion as they have been built on accurate understanding of human nature, and it is common knowledge that religious leaders have often shown a remarkable degree of insight into human motives and possibilities. But most social regulations have grown up blindly, appealing not to fact but to tradition for their authority. By more modern methods of studying large social movements and conditions and by increasing dependence on deliberate experiment in social organization we are gradually building a science of behavior which must inevitably replace traditional rules of ethics, in authority if not in content.

To this changed point of view our young people are already sensitive—far more sensitive than their leaders. It is a sign of progress, not of retrogression or moral lapse, if youth today prefer to be governed by common sense rather than by the moral codes taught their parents in childhood. The codes may be all right—their justification, and hence their place in the ethical autonomy of the individual, is all wrong. To replace taboos with social principles whose validity has been historically or experimentally demonstrated is one of the great reformations yet to be accomplished in religious education. The methods for doing it are not obvious, but its achievement is the very essence of growth in character.

Finally, we reach the one activity that is the unique function of religion, and therefore of religious education—the experience of worship. What has science to contribute to the practice of worship? I am tempted to answer: Nothing. The method of worship is not the method of science, though both converge in the art of living. Out of worship comes the

ordering of life's values, out of the applications of science come the methods for realizing them. Science and worship are partners, but each has its own work to do. We value science in proportion as it gets us results—but it is in the experience of worship that we realize *what results we want*. When we speak, therefore, of getting results from worship, of improving its technique, and the like, we should realize that we are speaking of results and methods quite distinct from those of science and to be judged by other standards. The value of worship is to be found within the worship experience itself. Any utilitarian standards applied to the experience of communion with God are as prone to destroy its very essence as in the case of human friendship. Friendship is primarily an end—a relationship between persons to maintain which is one of life's highest and most satisfying desires. The experience of God, by whatever terminology it may be designated, is in the same manner an end, not a means, and to interpret it only in terms of its effects is to miss its significance. The object of life is Life. All things are ordered so as to achieve it, and to this end the wise man assents and with all means to its realization he cooperates. But Life is ultimate. If a man would live—this is the great criterion.

This is why religion has been the mother of the arts and why, to continue to perform this function, she herself must not become an art, even in worship. Here religious education stands upon its own feet. In the experience of worship which is made possible for children it is not only unique, but independent. Let it seek to foster this experience, discovering the conditions under which it may be achieved most readily, but let the experience itself determine its own value and judge its own pattern, for in worship all the sundered fragments of life are knit together in moral union with the universal Will. Science and religion thus both per-

vade all life, the one yielding means and the other ends which come to concrete creative realization in character or the art of living.

As long as religion can continue its role of evaluation, and in worship keep open the doors through which the human will may hold commerce with the universal, there is no danger that religion will cease to produce ever new arts which, as they grow to the age of self consciousness, will in their turn establish in collaboration

with science their own independence. To keep the great family of the arts working happily together for the common welfare is something which no human institution or function has at heart. Perhaps we shall have to initiate a new social process for the integration of all human enterprises in one coordinated whole, utilizing science, religion, and the arts of life for one supreme purpose—effective participation in creative evolution—partnership with God.

II

CHANGES NECESSARY IN ELEMENTARY RELIGIOUS EDUCATION DUE TO CONFLICTS BETWEEN SCIENCE AND RELIGION

ADDRESS OF MRS. SOPHIA LYON FAHS*

ON THE surface, the conflicts between science and religion seem to be conflicts between religious beliefs and moral codes on the one hand and between scientific theories and data on the other. After more careful thought, however, we have come to realize that these conflicts are merely outward evidences of an age-long conflict, much more serious—namely, a conflict between two diametrically opposed processes. Two kinds of yeast have been leavening the lump of society, the scientific yeast and the yeast of divinely revealed religion. The deductive process in religion has been clashing with the inductive process in science. This fundamental conflict between two types of processes and the efforts of religion to turn about face and to travel with science are fraught with so great significance for religious education, and for religion itself, that if we could visualize what is coming to be, we should speak as it were with tongues of fire.

The essential harmonizing of religion and science must come, therefore, in the harmonizing of the processes themselves by which both religion and science live. Such an adjustment means the thorough-

going reconceiving of religion itself. Religion no longer can be the traditional religion of either Christianity or Judaism. A religion preeminently of beliefs and moral codes must change to a religion of quest. The essence of the religion of the new day will be found in the process, and that must be a process of search into the most intimate and the most perplexing problems of living—the problems of our personal aloneness in this complex universe and of our varied and myriad companionships. It will be conceived of as a search for God and for all which that may mean.

The soul's dilemmas are real. Even the tiny child must face them. A three-year-old sees a tortoise run over by an auto. "Just a minute ago it was a happy little tortoise," she says with a sigh, and she weeps, crushed by the tragedy that all living beings have had to face since life began. "What has happened?" she asks. "Will something like that happen to you, mummy? To me?" The crisis has come. The shadow has fallen. She has asked the question none can answer. She has begun the search.

With every problem which science has solved for us, a hundred new problems

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have sprung up. The human who continues to face reality and to keep alive is ever seeking and finding and seeking again. He is ever knocking at new doors. He is forever hungering and thirsting for that which he has not yet achieved.

Yet the very process with all its difficulties is a thrilling one. Some of us are wondering if the realization that the search itself is worth while will not give a finer religious security even to the child than one which is based upon an accepted unchanging belief; for religion as a quest is alive, a growing part of our very selves.

If we make this change in our conception of religion, there must come a correspondingly revolutionary change in religious education. No longer can religious education be the simple process of instructing children in a way already decided upon as the best; no longer can it be a passing on of moral principles even though in a most persuasive manner; no longer can we proclaim one only way of salvation, and prophesy destruction to those who do not accept it. No longer can we look to an infallible guide book to show us what to do. Religious growth and education in religion we must learn to conceive of as a process of questioning, of experimenting, in thought and in conduct.

When dealing with adults and adolescent youth, who have supposedly reached the age when they can think for themselves, we are more or less prepared to reconstruct our religious education in the light of this new conception of religion. Indeed our young people are beginning to make us feel uncomfortable if we seem unwilling to open up questions for discussion.

The place where we lose our courage, is when dealing with our little children. How young, we ask, should we expect a child to think for himself? Must we not during the early years of his religious education give him a positive and sure message? How else may the child have

the comfort and security he craves? And yet how can we honestly give our little children the comfort of a religion of absolute assurance when we ourselves are raising so many questions about the traditional God of our childhood?

The minister expressed the problem one day when calling in our office: "The Sunday school lessons for primary children and beginners," he said, "have been teaching children that God always takes care of them. Now that these little children have grown up, we pastors have to spend two-thirds of our time trying to explain to these same people why it is God has *not* taken care of them."

Many nursery school teachers and liberal mothers are baffled by the dilemmas they are facing. They realize the abiding significance of emotional conditionings in the early years. They yearn that their children may have something of the joy of security which religious faith can give. They are asking for new forms of prayers for nursery schools and for children's use at home. They shrink from encouraging a false and unwholesome security in God. They know too well the spiritual wrench which the reconstruction of their own faith meant to them.

Stumbling though we are in the fog, some of us are endeavoring to experiment to see if religion in the small child may begin to grow through the same inductive process of searching and questioning as we are coming to believe it should follow in later years. In other words, we are trying to discover if we can resolve at the very beginning the intellectual conflict between science and religion by harmonizing the processes.

We realize, in the first place, that if a zest for a search into the problems of religion is not to be blunted at the beginning of life, we as adults must not answer children's questionings about God and right and wrong with an air of finality that seems to assume some privileged resources for knowing the infinite

not vouchsafed to children. Instead, we would share with little children our attitude of search, and of wonder. We would sometimes purposely stimulate the raising of questions. We would share our experiences and our thoughts, in such a way as to give them no sacred authority. We would tell children of the struggles of men of the past. We would include among these the experiences of different races and of many types, believing that if children have a rich background for their own thinking, they can be trusted to think for themselves. We are more concerned to give children assistance in learning how objectively and thoughtfully to face their own problems, than to impress upon them the virtue in our beliefs and in our solutions for the ills of society.

Some of the experiences we have had in our Union School of Religion will illustrate our experimenting.

The themes for the children's worship services are often questions rather than ideas. Should we always tell the truth? was the question opened up in two successive worship services. Stories were told of adults who told lies and no dire results followed and stories of children who told the truth and suffered thereby. A forty minute discussion of the question in a fourth grade class justified the experiment in our minds.

Should we fight back or what should we do when treated unfairly? was the question running through a series of six of our junior worship services. Various stories were told. One Sunday, we told one of Tolstoi's stories where a tragic fire burnt half a Russian village, all because of a misunderstanding and a quarrel over one egg. The story of Gideon was told as the story of two tribes both of which wished to live in the same valley, and of how a chieftain thirsting for revenge believed his God fought with him in battle. Two Sundays were spent on George Fox who would not carry a sword or serve as a soldier, or even strike back when

others beat him. Two stories were told of Mary Livermore as a child in a strict New England family of a hundred years ago, where parents and teachers by their arbitrary methods robbed her and her friends of their simple rights as human beings. What should they do? What could they do? Finally the series was ended in an assembly when three or four children told stories out of their own experiences of occasions when they felt that they themselves or their friends had been wronged. They asked the other children what they thought they should have done. There resulted no unanimity of judgment, but an interest and concern in the problem.

Another episode will reveal the point of view the children are coming to expect. A class of eight and nine year olds had become obstreperous and during their play period out of doors two of the boys had a snowball fight which had ended in a glorious victory for one boy and a humiliating defeat for another whose face was washed with snow. On returning to the classroom the teacher suggested that they talk a little bit about fighting. The result was a releasing of the children's feelings through a frank expression of their attitudes. Early in the discussion Bobby announced, "I think that fighting is always wrong. How can we ever have a perfect society," he said, "if people fight, and if we fight when we are boys we'll probably fight when we are men."

"Sure you do," said the returned conqueror, "because you're a sissy and afraid to fight, so you say it isn't right to."

"Don't you ever feel like fighting, Bobby?" asked the teacher. "I just want to know about your feelings now, and not what you think is right or wrong."

"I should say I do," replied Bobby, with much feeling. "Lots of times I could just murder somebody till they died. I feel like torturing them, too. You bet I have those feelings. I'd like to fight and fight, but I'm always scared I'll get licked."

"Now you're talking—" came the retort from one of the group.

A child older by two or three years than most in the class was visiting the school for the first time on this particular morning. Having had her religious education in another type of church school she had interposed rather pious remarks from time to time. Finally she said, "If I get into a situation like that I stop and think 'what would Jesus have me do?'"

"Oh, mercy!" said Bobby, "You better get out of here. You're a sixth grader, and we don't know what you're talking about. 'What would Jesus do?' What does that mean? You just sit here and keep telling us this is the thing to do and this other is not. Mrs. Sweet doesn't talk like that. She lets us think about it."

At another time, a miner from Pennsylvania, a leader in the present strike, told with an honest directness in our junior chapel, the tragic story of his fellow miners. The children's cups of sympathy were running over. Perhaps we might have moulded them all into passionate social reformers. But did we ourselves know the way to heal society of this intricate cancerous growth? No. We would share with the children more of our bewilderments over the problems. We would not let their emotion find its outlet merely in a bit of generous giving. So we brought other kinds of speakers to them. Out of their own childhood experiences we tried to bring appreciation of the naturalness of the tendencies we all manifest when we gain power over others. We visualized the clashing of labor unions and manufacturers' associations. We pictured for them a futile strike in a paper box factory.

The boys of the sixth and seventh grades wrote a play of their own and presented it, with scenery of their own making, to the rest of the school, showing the risks involved in coal mining. At the close they asked the group to sing

"This Is Our Father's World" but raised the question, "Is this our Father's world?"

In the classroom the fourth graders pursued the question, "Is there really a God then? Have we a God who is like a father that looks after us and takes care of us?"

"If we have that kind of a God," said nine year old Jack, "he must be the rich man's God, for he doesn't seem to do much for people like coal miners or the paper box workers."

"It seems to me," said one of the girls, "that we really don't know much about God. How do people really get to know him? I don't see how they can."

"The Bible tells us something about God," said Ben.

"But we know that the Bible isn't all true and how are we going to tell which parts are?" asked the girl.

The discussion lasted for about a half hour. The teacher told the children how different people thought about the Bible and explained several different attitudes toward God.

The children seemed inclined to think that we could be sure of very little direct knowledge about God—that it didn't look as though he helped us directly by telling us what was right and what was wrong or by protecting people from danger and suffering, because there were so many people in the world who suffered. There were, however, some things they thought they knew for sure and one was that if we tried hard enough we could make this world a happier place to live in for many more people than now find life good.

In our worship services with children we assume the existence of God, but we speak freely and sympathetically of different conceptions of him.

We tell our children of the beautiful conception of God achieved by Ikuaton of Egypt and we sing an adaptation of one of his psalms. We find that our own desires for thanksgiving may find some

expression through the prayers used in an American Indian corn festival. That then becomes a part of our own worship service. At times we sing in our own worshipping a Zuni Indian call to prayer.

In our prayers we more often speak of God as a Father than through other symbols, yet we also speak of God as Mother, or as a creator whose creative activities we may partly share as did Luther Burbank. We refer to God usually as a person because we think he cannot be less than a personality; yet we lead the children through experiences with life and nature to wonder and to question. We put something of wistfulness into our praying. "Oh, that I knew where I might find God."

In a third grade group of boys and girls eight and nine years old, Tom said, "I asked my mother a question last night and she told me to ask you today. I'm sort of afraid to ask it, though."

When the teacher assured him that it didn't matter what the question was, he said:

"Well, is there any God?"

"I will turn the question back to you, children," said the teacher. "Do you think there is a God?"

In the half hour discussion which followed, the children mentioned many different sorts of evidences which they themselves saw for God.

They discussed the problem with equal fervor a second Sunday.

The teacher pictured for them the life of a caveman and his family whose shelter was struck by lightning. She told how these simple early folk made offerings because they were afraid of a god who they believed brought such calamities. Their ways were contrasted with the ways in which we now meet disasters, such as the New England flood.

The story of the weeks that have followed is in reality the story of a serious and thrilling quest. The class has been told stories of the beginnings of things and of different ideas of God different

people have had. They have studied birds, frogs, and fishes, and they have moulded models of them in clay. They have discovered how wonderfully each animal has been prepared to protect itself and to grow and how finer living forms have evolved from lower forms. One child who up to this year had taken the creation story of Genesis literally added lately a new sentence to her usual nightly prayer. "I thank thee for giving the world such a wonderful start and that it is going along so nicely."

Should Tom have been answered directly by the teacher and given adult assurance that there is a God? Should she have tried to give him the comfort of feeling absolutely sure? Does Tom need such an unshakable faith? Would it prove in reality to be unshakable because the teacher assured him it should be so? What would have happened then to the group's interest in knowing different ideas of God? Would they have needed to think and think? Or instead of accepting an assurance handed to them by an adult, did the children really need the kind of security and assurance they actually received, namely, the courageous and sympathetic companionship of an older person during their search? To us, children's questions are opportunities not for us to give answers but opportunities for stimulating children to further questionings. We would give them security in the process of search rather than have them feel that security must wait for a settled faith.

* * *

Now that I have said all that I have regarding the reconstruction necessary in the intellectual process involved for children if science and religion are to be mutually helpful, it seems to me that perhaps the most important issue of all has been left unconsidered.

Is the major conflict between science and religion on the intellectual level of life? How far do our emotional needs determine for us the conflicts and how

we face them? The longer I work with children the stronger grows the impression that the intellectual conflicts between science and religion would seem rather simple if the essential emotional conflicts would be first solved which the acceptance of a larger vision of the universe seems to precipitate.

For example, Harry is a high school boy whose own mother died when he was but a young child. A grandmother, a nurse, a nervous and extremely demanding step-mother, and finally several arbitrary masters of boarding schools have been successively mother substitutes for him. Harry's own father also is a Puritanish disciplinarian and one who in addition has planned and ordered Harry's life for him. Furthermore, Harry has lived a life of ease with servants ready to wait upon him. Harry is hungry for mother love, rebellious of the restraints of a commanding authority, and yet accustomed to a world of easy cushions and things to lean upon.

The God presented to him in childhood was a being who gave added authority to what parents said was right and wrong. God seems to him to be like a judge ready to mete out punishment for offenses. He is afraid to omit saying his prayers at night because, as he said, "You never know what God might do."

Jesus also was a God to Harry—but a God of love, gentleness, forgiveness. The Union School of Religion introduced him to a study of the Jesus of the Synoptic records. He began to visualize an historical Jesus. We found he was fearing the reconstructing of a new Jesus. "I hate to feel I have to give up thinking that Jesus is God," he said.

Whatever may or may not be the truth regarding Jesus, is the process of examining the issue primarily one that can be determined intellectually by him on the basis of data, in view of the boy's deep emotional need for just the sort of God that Jesus may be to him?

Another example—Mary is the eight

year old daughter in a home of piety where children have been taught what is right and what is wrong. "Father says so—" is enough to settle most questions of conduct. What mother says is good. What the Bible says, what teacher says,—these are Mary's guides to conduct. She seems to need the approval of some adult before she can make unaccustomed decisions. To a grandparent in the household, to question the reality of God's care in itself seems wrong.

Because of a serious illness Mary had to leave this comforting and protecting godly home when she was six, and remain alone for months in a hospital. At first she was extremely homesick. Then she had a deep religious and emotional experience in which she found God. She was now sure he was caring for her. She lived happily in this faith.

She enters this class of third grade children in which the doubting Thomas asks, "Is there really a God?" The teacher opens up the question seriously.

What are the two differing processes going on—the one at home and the one in the school of religion—doing for Mary? Can she endure the conflict? It would seem not unlikely that she will reject a growing thought of God and cling to the comfort and the authority of the home religion.

Let us consider another child, Herbert, a shy boy, unable to mix happily in the playground with other boys, and yet a boy who intellectually has in him the possibilities of a genius. In his home, he is continually being surpassed by an elder child. He seems to yearn to show his equality with other boys, yet when he fights he is usually beaten. He is, therefore, a little afraid of life. The intensity of the inner conflict for the boy, of which he himself is unaware, is evidenced by his inconsistencies. He says one thing in discussions. He does another in real life. In his actual contacts with other children he is usually a pacifist; yet in discussions he is one of the most insis-

tent in saying, "If you get into a scrap the best thing is to sock the other fellow one and go on about your own business." He doesn't know why he does as he does. When he realizes his inconsistency, he is troubled. It but adds to his feeling of inferiority. When, therefore, in one of the discussions about God, Herbert said, "God, then, is really responsible for making guns," our thinking was challenged. It seemed to us that he was projecting even into his conception of God his desire to grow big and strong and to fight.

A four year old child, the daughter of a philosopher and a scholar, asked questions about God. Her father endeavored frankly to explain in simple language the two philosophies of life—that of the traditional God and angels and that which seemed to him to be more in accord with modern science.

Later this precocious four year old, accustomed to write her thought in blank verse, wrote the following lines, which the parents afterwards found in her nursery.

"If I were great
I would make angels be
In the air again,
And God in the sky come true."

In this the child has expressed the natural longing of every human. Can we as adults endure emotionally the knowledge of the facts which science perpetually is throwing at us? Should we ex-

pect children to do so? Or must they be protected from reality even in religion until they grow emotionally so that they can face the issues without being overwhelmed?

We have in all of us a natural longing to adventure into new fields, to become larger personalities, to feel our growing power. We also have in us a desire to remain as children, to be cared for, to be told what to do and what not to do, to "rest in flowery beds of ease," thinking only of immediate wants. Life is a continual emotional struggle to wean ourselves away from our childish wishes and to keep on in the climb toward manhood and womanhood.

Conflicts between science and religion come in the struggle to protect our desire for an egocentric world in spite of the realities of which science intellectually convinces us.

This emotional conflict, some of us believe, is the most significant part of the struggle between science and religion. It is, however, a part about which we as religious educators have concerned ourselves but little. The psychoanalysts and the leaders in the child study movement have summoned us to take account. As yet we can but prophesy concerning the revolution in our religious education which is involved. It marks one of the most needed fields for experimentation.

III

RELIGIOUS EDUCATION AS ADAPTATION TO ENVIRONMENT

ADDRESS OF PROFESSOR A. DUNCAN YOCUM*

BY RELIGIOUS education as adaptation is not meant the sort of adaptation in which environment and circumstance dominate man and make him take on virtues as rainbow trout take on the colors and shadows of the pools where they lie concealed, or a tree frog grows green as the leaves which give it shelter. The life of a Thomas á Kempis in his

Imitation of Christ is something more than a sort of protective coloring, and a curriculum of religious instruction involves something beyond a mere listing of situations.

Man has adapted himself to nature not by cowering in some burrow too narrow for the cave bear to enter, but through an inherent strength, love, faith, and responsibility, which, with the self

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sacrifice that adapts them to changing situations, are his natural self expression, and through which, as the image of God who made him or of gods he has been god-like enough to make, he has as a race become more god-like in each succeeding age. His only reason for fear of environment or of the civilization which he has created is that it should make him less strong, less loving, less faithful, and less responsible. He adapts himself through self sacrifice in order that he and his kind shall express themselves more fully. And the measure of the progress of both material civilization and religion is whether individual man, as he makes the sacrifices necessary to them, becomes as a result of them stronger, more loving, more faithful, and more responsible.

However else science may differ from religion, and philosophical systems and religious creeds from each other, if they are true to man they must exist for this common end—that each through man's self sacrifice must make him more a man. The philosopher may be trained to his self sacrifice, strength, love, faith, and responsibility through his philosophy; the Jew, through the teachings of Abraham and Moses; the Christian, less through his fundamentalism or his liberalism, than through his following the example of Christ. But all philosophies, religions and sciences have religious education as a common meeting ground, because each must teach man to be a man by becoming more and more like a god.

The most significant fact in religious education is not that man must adapt himself to situations and have a different characteristic or combination of characteristics for every changing circumstance; but that there are in him, as his essential nature, certain characteristics which, if made usefully and generally controlling, will result in every quality or virtue that each new situation or change in circumstance demands. This adaptation through self sacrifice in order to ensure the fullest

self expression, is not only the supreme test of racial civilization, but of individual character and personality.

ALL-INCLUSIVE AND ALL-CONTROLLING KEY-CHARACTERISTICS

Emerson somewhere has said that as the making of a thousand forests are in the first acorn, so Egypt, Greece, Rome, Britain, America, lie already unfolded in the mind of the first man. This is as true spiritually as it is intellectually. The first man was strong through self expression and self sacrifice exercised merely for self, family, or tribe. He had faith in myths and local gods, loved his mate, his children, and his cave, and had a sense of responsibility through ability and ownership. Thus partially developed, these qualities represented his spiritual manhood. From their adaptations to new situations in succeeding ages and epochs, all other spiritual characteristics of man have been developed. And no one will deny that the race has had its highest expression in those individuals most completely controlled by self sacrifice, strength, love, faith, and responsibility. But in the primitive community every *individual* was surely and sternly controlled by them.

Rousseau is wrong in assuming that barbarians are moral because life unspoiled by civilization is simple. Primitive peoples are moral because their virtues are few and their possession by every individual is essential to the continued existence and prosperity of all. The community compels them. If a man is not strong, he perishes. If he lacks faith, he is sacrificed to the offended gods. He must return with his shield or upon it.

If in the course of history every individual, like the race, had become *more* self sacrificing, and stronger, more loving, more faithful, and more responsible through his self sacrifice, each individual today, like the race, would be possessed of every virtue.

DIFFERENTIATION OF THE KEY-CHARACTERISTICS IN RACIAL HISTORY, INTO ALL THE INDIVIDUAL AND LOCAL VIRTUES THROUGH ADAPTATIONS WHICH HAVE RESULTED IN THEIR DIMINUTION IN PLACE OF THEIR DOMINATION

But *differentiation* through adaptation often has resulted in a *diminution* of self expression and self sacrifice as civilization developed, and as strength, love, faith, or responsibility took on the varied forms which new situations demanded.

For the *race*, self expression and self sacrifice applied, for example, to situations involving the facing of obstacles and dangers, differentiated into bravery, decisiveness, perseverance, and hope, and perseverance into steadfastness and progressiveness, with such further variations as persistency, endurance, and indomitableness.

But for the *individual* and for particular *localities*, virtues as they have multiplied not only have become local and personal, but have remained so. And the great key virtues, in place of having been cumulatively made stronger and dominating for every individual and in every location, revealing themselves in every special virtue, have been so lost in variety that they are classified by modern situationists and mechanists as "empty abstractions." Worse than this, each key virtue not having limited and completed the others or having been limited and completed by them, its individual and local adaptations have often become individual and local faults in which the adapted key virtue is socially unnoted and educationally ignored.

Every man is still self sacrificing for some sort of strength, and for love of it, faith in it, or responsibility for it. But his self sacrifice may be marked by a miserliness which is unloving and unlovely, or a selfishness which involves self sacrifice for self incompletely by any self sacrifice for others. Every man still has a love of something, but it may be possessive without being self sacrificing,

and lack the kindness and sympathy which loving responsibility assures. Every man still has, at least at times, the self respect which comes from self expression and self sacrifice employed in living up to his own standards, but unlimited by faith in God or in others and by the recognition of dependence which it gives, his self respect may take the form of vanity or boastfulness, in place of an integrity and dignity completed by humility.

It is not easy sometimes for the parent or the teacher to see in a boy's stubbornness the perseverance and strength through self expression and self sacrifice, which, limited by faith in the judgment of the wise and good, could easily become steadfastness and perseverance made useful as persistency, endurance, and indomitableness. In a paper which I presented to the Association at the close of the Great War, I raised the question whether the time had not come when, standing in awe at the "Glory of the Trenches," religious workers would begin to seek the betterment of men through partial and imperfect good which they already possess, in place of condemning and attempting to repress what is often a lesser and less controlling evil in them.

Indeed, since mankind has so adapted itself through self sacrifice that the race at its best has self expressed itself through an ever increasing strength, love, faith, and responsibility, even if individual variations and distortions of these key virtues did not already exist in every man, a concentration of religious education, character development, and the teaching of democracy upon them and their great common factor, self sacrifice, should result in making them as controlling for every individual in the most generally useful form as they were for primitive man in their earliest varieties.

That is, if primitive communities by concentrating on a few virtues ensured them to every individual, modern society with all of its scientific means to educa-

tional efficiency should be able to develop the four key virtues still more controllingly for everyone. Indeed, where a modern social group has concentrated all of its influence upon the development of a few specific traits, they have been controllingly developed in most individuals within the group. The Jew has successfully taught family loyalty, the Catholic reverence for what the Church regards as holy, the Christian Scientist faith and optimism in the face of every form of trial and suffering.

The key virtues, with an equally compelling concentration of religious effort upon them and a far more scientific curriculum planned with them as its controlling outcomes, can be developed still more surely; and once made controlling in every individual and limiting and completing each other, they can be made the multiplication table for all human virtues. The fundamental racial recapitulation in the development of a man will not be found in cultural epochs, but in the adaptation of his essential manliness to life situations, now so enormously multiplied for the individual, in such fashion that the individual will develop all the virtues which the race has developed when confronted by similar situations.

ALL EMBRACING INDIVIDUAL EXPERIENCE
MULTIPLIED A HUNDRED FOLD BY MOTION
PICTURES, RADIO AND AUTOMOBILE,
AND GIVING EVERY INDIVIDUAL EVERY
SORT OF SITUATION AND EXPERIENCE

As individual experience, multiplied without limit by motion picture, radio, automobile and the rest, has become all embracing, the need for an equally all inclusive control of it becomes evident. The ordinary individual sees everything that has happened in the world from Moses teaching the Israelites the Ten Commandments and the revelries of Nero, to the *Covered Wagon*, the Great World War, *Adam Bede*, Charlie Chaplin in *The Circus*, and *Chang* struggling on the frontier to keep back the jungle;

and hears everything from the *Creation*, the *Messiah*, and Negro spirituals to the last night club hit, the President delivering his message, the mother of Lindbergh being congratulated by her fellow teachers in the National Education Association, and *Just Like a Butterfly Caught in the Rain*.

Not only is no experience denied him, but every sort of experience is thrust upon him. Never has one individual so fully experienced the life of all other individuals. Never has he so inclusively realized, believed in, deplored, desired, and thrilled over what others have felt, liked, and disliked. Never before has character been formed so rapidly, and so largely as a matter of chance.

And it is now, with a thousand unobserved and forever unobservable situations crowding upon each other in the mind of the child, that we have begun to count and to list the few situations which we can observe and will often misinterpret; and in avoidance of "empty abstractions" are seeking to provide a special virtue or combination of virtues for each new situation in the hope that when a similar one comes along it may be met by the new virtue that has not yet become a habit and that is demanded in a continually changing form.

We are training children to think their way through a few situations. In the process we assume the "transfer" of this generally useful habit of balanced judgment to all situations, and that somehow seems more reasonable than scientifically experimenting with the transfer of key virtues.

It is in this primitive fashion that we are attempting to counteract and control the great chance complexes made almost irresistible by an ever increasing individual experience which has given every child the assurance of a man of judgment and every flapper a contempt for all standards other than her own.

The complexes of chance must be con-

trolled, if they are to be controlled at all, not by some Mary-had-a-little-lamb type of situation where an incidental moral lesson is taught because something wanders into the schoolroom or children have enthusiastically proclaimed the Spanish people lazy because Spain's economic undevelopment has been chosen by them as a school "problem"; but by powerful instruction complexes through which the great key virtues are made more surely controlling for all individuals and groups, than any subordinate one has ever been made controlling for a single individual or group. An unlimited common individual experience must be dominated by an all controlling common character.

PERMANENT INSTRUCTION COMPLEXES
THROUGH WHICH EACH INDIVIDUAL
CAN DEVELOP THE KEY VIRTUES AND
THROUGH THEM EVERY OTHER WHICH
THE RACE HAS DEVELOPED

It is in the very fullness of time that there has been discovered a fact destined to be as significant for the spiritual inheritance of the race as the discovery of the chemical elements and the possibility of combining them into every needed substance has been for material civilization. An analysis of the elements in experience necessary to the development of one special virtue after another shows that each is made up of the same elements that similar instruction analysis finds conspicuously present in the complexes necessary for the development and control of strength, love, faith, and responsibility. Indeed, as in the mechanical world the chemical elements are being still further analyzed into yet fewer elements or forces, so the four key virtues are probably still further analyzable into self sacrifice and self activity with what psychologists call their affective states. But the epoch making fact that concerns religious education is that a super instruction now makes possible for the key characteristics a super control. Just as the great dams and power plants have

converted to the use of man the storm, the flood, and the cataract, so a sufficiently controlled experience can direct the torrent of situations which enter into the life of modern man, into forces which will make him good.

In place of courses of study which teach truthfulness in the second grade and obedience in the sixth, and of parents who have lovingly sacrificed for children who are not self sacrificing in return, every child will be practiced in attainable steps from little sacrifices to great ones, will have opposing tendencies counteracted, will be habitually made not over dependent upon material things, will be given continual experience in judging between just and useful sacrifices and sacrifices which are carried too far, and so on, year after year in home, church school, and public school, until cheerful and useful sacrifice is more natural to him than demanding whatever he happens to wish. And so, in teaching each of the other key virtues, in place of attempting to meet through a few chance situations of school life or the hundred listed as most characteristic of a certain period of development, the ten thousand impressions which John Paul Richter even in the comparatively uneventful life of a century ago was tempted to regard as stronger than the influence of any teacher—the ten thousand impressions of the street with ten thousand more effective ones selected by the school can give each key virtue controlling power and link it by means as sure as wires of copper and rails of steel, with every useful application.

Where a habitually controlling realization is needed in such a complex, it will be strengthened by experience after experience until it is so controllingly real that no reality dependent upon chance experiences can oppose it. Attitudes will be rightly centered there, the motives needed will be enough and strong enough, all habits required will be surely formed. With each key virtue limited and com-

pleted by the others made just as controlling, no hereditary tendency less fixed than the inherent manliness of man, or any opposing Freudian complex falsely assumed to be unhealthy to repress, can stand against it.

In such an instruction science becomes the symbol of mighty complexes. And strength leaps to strength, as self expression and self sacrifice strong enough to control us in situations involving obstacles and dangers, or any other typical human experience, suggest such types and subordinates as bravery, decisiveness, perseverance and hope; through perseverance, steadfastness and progressiveness; and through them in turn—persistence, endurance, unconquerableness, and all the other characteristics which continually label familiar situations. Such a verbal interconnecting system will as surely interrelate each key complex with the situations to which it applies, as railroad tracks and telegraph lines in the material world connect each great producing center with the market where its products are consumed. And words so used as an interconnecting system in individual minds are no more "empty," than tracks full of freight trains and wires relaying their messages.

TESTING, ANALYSIS, MEASUREMENT AND EXPERIMENTATION WHICH MUST CONCERN ITSELF LESS WITH INDIVIDUAL BEHAVIOR, AND MORE WITH THE BUILDING UP OF SUCH COMPLEXES

The Curriculum Committee in the American Education Division of the Interchurch World Movement planned tests, analyses, researches, and experiments which, if a listing of situations had not seemed more fundamental and scientific to certain great Foundations or research agencies, would long before this have triumphantly demonstrated the practicability of developing the many vir-

tues through the sure development of the few. The Standards for Curriculum Research adopted by the Education Committee of the International Sunday School Council of Religious Education some years ago specified this same type of investigation, but the Lesson Committee of the International Sunday School Association for a time confined itself to listing situations. The Character Education Committee of the National Education Association, when the building up of instruction complexes was planned as a part of its activities, stood aghast at the scientific procedures involved, and disbanded after collecting various types of existing data and making recommendations as to its use. The Committee on the Teaching of Democracy of the National Council of Education published at least one tentative instruction complex in its reports.

But the analyses now being carried on by the Curriculum Committee of the International Council of Religious Education and the Joint Committee of the Presbyterian and Reformed Education Boards, together with investigations under way in my own Department, are scratching the surface in what promises to be the most important experimentation yet carried on for the benefit of the human race. To experiment with the strengthening and counteracting elements necessary to make each key virtue controlling, with the completing and limiting ones necessary to its usefulness, and with the interconnecting and transferring ones involved in its most generally useful application, may prove to be the means of integrating science and religion, and of making the material civilization which now threatens to dominate man as he adjusts it to his use, the means to the more complete development of his manliness and the medium for his truest expression.

A NEW SCIENCE AND A NEW RELIGION

ADDRESS OF PROFESSOR RUFUS M. JONES*

I HEARD of a little girl who was out walking with her mother the other day. She saw a beautiful piece of variegated colored oil on the pavement of the road, and said, "Oh, look, Mother, there's a poor rainbow all smashed."

Some have been wondering during the sessions of this conference whether that was going to happen to our iridescent rainbows, our visions of belief.

I have been working a good many years now with a great desire that we should not see quite so definitely as we sometimes do the lines of division between one another in matters of religion. I have outgrown my interest in fences that separate us. I had a professor at Harvard who used to tell us that when he was a boy he heard there was going to be an eclipse of the sun, and he went and sold tickets to all his boy friends for ten cents apiece to come and see the eclipse in his back yard. The boys paid their good money and came and saw the eclipse, and then discovered they could have seen it just as well outside the fence as inside.

I suppose it will be a long time before we get so that we realize that we can see eclipses, and suns too, just as well without getting inside of a little cooped up fence and separating ourselves from somebody else. The more I mingle with men, the more I love these deeper aspects of the soul that bind us together, and the more I feel unhappy over those things that separate us.

We have been living today, as everybody knows, in one of the supreme transition epochs of human history. There are certainly two transition periods in human history that can compare with the one we are passing through. In all such transition periods, what always is obvious is the destructive aspect of the transition

movement. You see the destructive aspects and you fail to notice the birth throes forces.

When Napoleon fought the battle of Wagram in 1809, coming as it did after the battle of Jena and after the battle of Austerlitz, all that were looking on felt that the end of the world was in sight, that there had been a collapse of everything for which they had struggled. Pitt rolled up his map and died. Fox followed him very shortly afterwards, and there seemed no hope in the world. Well that same year, 1809, Charles Darwin was born, William E. Gladstone was born, Alfred Tennyson was born, Elizabeth Barrett Browning was born, Chopin was born, Felix Mendelssohn was born, Edgar Allen Poe was born, Oliver Wendell Holmes was born, Abraham Lincoln was born—all in that very year. Nobody knew, nobody dreamed, what the birth throes of 1809 meant. Nobody saw it. But looking back, we realize that Wagram is a word that only the schoolboy who has just been studying history remembers anything about. And the birth throes have produced a new world.

The difficulty is that life is made up of two great factors, one the transferable factor and the other the untransferable. We are always confronted with the transferable aspect, that which can be organized and put into formula and passed from mind to mind, which we can all learn and grasp and get hold of. Most of our teaching in school and college is the transferable. We dwell on the transferable. But the thing that makes our civilization and our life is always that inarticulate, that indescribable, that unformulated, untransferable aspect of life and civilization which is vastly the most important thing in any generation and in any world.

We have been living at a terrific pace

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in terms of the transferable. Our knowledge has been put into a little package and passed easily from mind to mind. We have grasped the scientific conclusions to a large extent, and we have not been busy at anything like the same extent, cultivating these deeper things that make our life. Those aspirations, those hopes, those faiths that build the world and build the soul, they are harder to deal with, but they are always vastly more important.

William James once said, "I am done with great things and big things, and I am for those tiny, invisible, molecular moral forces that work from individual to individual, creeping in through the crannies of the world like so many soft rootlets or like the capillary oozing of water, but which, given time, will rend the hardest monuments of man's pride." It is those mighty forces, those vast constructive forces, to which now we must turn attention. We have to build a new world. We have let loose vast forces that are more or less destructive.

Moby Dick, the greatest story that America has yet produced, I think—Moby Dick is a parable of life. It is not merely a story. It is the story of the great white whale that symbolizes those mighty uncontrollable forces when they are let loose in the world. And if we are to have our civilization permanent, we shall not make it permanent by bringing in a Mussolini to handle our freedom for us, even though we are making a mess of it to a large extent. If we are going to save our civilization and rebuild our world, we have got to turn our attention more seriously to this business of training these deeper aspects of our life, and of liberating these vast moral and spiritual forces that are the only thing that will make civilization safe. It has been said, and I think truly said, that no great country has ever survived the collapse of its faith. I do not believe we shall ever get a safe world, a world in which we shall be happy to live, a safe Chicago

where you can wear the same watch that you had when you were a boy, unless you do something to build the deeper world with which we are concerned.

I walked the streets of Tokio and Yokohama four years after the destruction of those two cities, the major disaster that has ever happened to any great city in the world, and one would hardly know there had ever been an earthquake there. The cities had recovered in such an amazing fashion. It makes one understand that a city can lose its warehouses, its big stores, its railroad stations, its streets, and leap right back the moment it gets a chance into prosperity and success. But once you destroy the vitality of its atmosphere, and the fertility of its soil, it cannot recover from that disaster. And among the things that are most vital for the life of a people are just these intangible, untransferable, vital spiritual and moral forces that form the basic foundation of the people.

We have been busy discovering the nature of the atom, finding out that we can see 40,000 stars where Job saw the seven Pleiades; we have sky-scrapers sixty stories high, higher than the tower of Babel, higher than the Pyramids. We can travel 217 miles an hour. But what kind of person are you when you get there? What kind of business are you doing up in the sixtieth story? It is time for us to turn to the inward tasks, not to leave behind the external problems at which we are so successful, but it is time for us now, with the same intensity, with the same kind of skill and technique, to build the soul, to build the soul in our boys and girls and in ourselves.

I think we have turned the corner. I can see emerging a new science that is going to deal more adequately with those great, basic facts that have to do with life. Even in the world of matter, if we have a new science, we know now as we never knew before that atoms have come out of an invisible universe, that the vis-

ible world is born out of an invisible world, and every atom that is born has been to school in mathematics before it has been born. It begins to act mathematically the moment it emerges. There is something behind there, something that is worth asking about.

In the world of sciences of life, we are just approaching a new stage. We are coming to a new stage in literature, in fiction. We have been having a lot of sewer fiction. We have been drenched with murders and divorces and scandals till we have had no fresh free air to breathe for our souls. Thank God now we have got at least one book we can all read and look each other in the face: *The Bridge of San Luis Rey*. If you have not read it, read it. After we get some great pieces of fiction that give us fresh air in our inward lungs, I think we shall be near to a revolt against the pernicious stuff through which our children and sometimes we ourselves have been dragged. Sometime the newspapers are going to wake up to discover that there are other things in the universe besides murders and bandits. Why I know nearly a hundred people out within a little

range of my life, and not one of them has yet been divorced. That interests me just about as much as some of these other things do.

We are on the verge, I think, of a new religion, not a religion that will take the place of the old, but in which we shall not look for God any more in the sky,—we shall find *the beyond within ourselves*, and we shall realize that God is Spirit and that he pours his life around us as the waters of the Pacific pour around the islands that are in it. We are seeking him forever because in some sense we have already found him, closer to us than breathing and nearer than hands or feet.

Does the fish soar to find the ocean? Does the eagle plunge to find the air? And does the soul that is bathed with the life of God need to go elsewhere to find him? I prophesy that some day not far off, instead of finding our rainbow all smashed, we shall find the rainbow spans the life of the world, and while we may still differ about the nature of God, we shall not differ about the eternal realities that build life.

THE PROGRESS OF THINKING IN THE CONVENTION

A SUMMARY OF THE CONTRIBUTIONS OF THE PAPERS AND THE DISCUSSIONS*

HARRISON SACKET ELLIOTT†

The opening session Tuesday evening set clearly the issue which the development of science brings for religion. If we accept the universality of law, that "no gaps are to be filled in by super-

natural intervention," question is at once raised regarding divine providence in human affairs and efficacy of petitionary prayer. In the previous advances of science, religion has withdrawn within the "inexpugnable defences of the inner life," but psychologists are claiming that here, as elsewhere, law reigns and nothing happens by chance. Consequently liberals in religion can no longer retreat from the issue. They must face the question of what, in a world where science is ac-

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*This summary has been condensed by Professor Elliott, chairman of the discussion, from the stenotypist's verbatim notes. The condensation has been made with every effort to represent accurately the distinctive contribution of each participant. Since there has been no opportunity to submit this summary to those participating in the discussion, the chairman must accept responsibility for any inaccuracies in the statement.

cepted, they mean by God and why they believe in God. In philosophy this issue is focused in naturalism versus vitalism. (See President Falconer's and Professor Pratt's papers, pages 278-288.)

* * *

The Wednesday morning session considered the basic assumptions of science in their bearing upon religion. To the issue as raised in the opening session, the papers of Professor Northrop and President Morehouse brought the positive contribution that science is by no means united on a materialistic conception of nature and human nature and that the interpretations of science of men like Eddington and Whitehead form the basis for a positive relation between science and religion. (See pages 289-296.)

In the discussion which followed, Professor Holmes insisted that if religion would mind its own business, it would have no difficulty with science because the business of religion was with purposes and not facts. Its interest was in the Kingdom of God, and the bringing in of this Kingdom involved choices. Professor Northrop's reply was that choices depended upon science because one's wish meant nothing unless he could do something about it. The difficulty with religion is that it has remained in the realm of abstract desire rather than linking itself with science in a way to bring its desires to pass. We must place religion on a scientific basis in the sense that we find out what it means in actual practice.

Mr. Sharp suggested that the scientific approach places limitations upon a personal interpretation of our universe and tends to depersonalize the intuitions of man. It is difficult to pray to and worship force. Many people feel that science is taking their God away. A reply was made that a scientific supernaturalism did not have the everlasting caprice of the ordinary conception of the supernatural, but science made available the scientific resources and enabled us to link up re-

ligious education with scientific insight. Professor Beiler felt that while the conception of God possible in a world of science was more indefinite, it was none the less real and vital.

Professor Northrop said that it is not a question of facts against values, but rather that we arrive at the good at the end of scientific investigation. A consistent system is the source of values. The technical sciences have been specialized. What is needed is that they shall find their inter-relations; in short, that there shall be a philosophy of science. One's philosophy and one's religion cannot be independent of scientific facts but must be found within and be based upon detailed knowledge.

* * *

The addresses of Wednesday afternoon by Professors Leuba and Brown considered the basic assumptions of religion in their bearing on science. (See pages 297-303.) It was evident that terms were being used by these men in different senses and that part of their disagreement was verbal rather than actual. Consequently, the first part of the discussion was given to an attempt to understand the two points of view and particularly to define the real differences. This discussion centered around Professor Leuba's suggestion that what he called the "face to face relationship with the God of the religions,—God in direct, affective, and intellectual relation with man, able and, under certain conditions, willing to respond to his needs and desires" was a method which those who accepted scientific processes no longer considered effective in the physical realm nor in the formation and transformation of character. (Professor Leuba in his paper had implied that there was no conflict between science and what he called a mystical relation to God.)

There seemed to be agreement between Professor Leuba and Professor Brown as to the universality of orderly pro-

cesses; but the difference seemed to be this. Professor Leuba: "If you wish to realize these possibilities, you will use the method not of direct appeal to God to intervene in what we have called historically prayer and worship, but you will use the methods of science." Professor Brown: "Granting all that scientific method can accomplish, the personal relationship of an individual with a God to whom he prays directly and whom he worships accomplishes something which can not be accomplished through these orderly processes of science."

Professor Leuba, in opening the discussion, said that he was talking only about one conception of God and one type of religion but he felt this was the kind of God implied in prayer-books, hymns, and other forms of worship in the average church. "The effects of ordinary religious prayer, according to the scientist, are not due to the intervention of the God of religions, but are due to other factors. This God of the religions is supposed to act outside of law. If the God of the religions worked through law, and only through law, what would be the sense of attempting to maintain with him the relation we do maintain in our churches? The only thing we would have to do is to discover the laws of nature, physical and mental, and do what we can after we have discovered these laws, and that is just what the scientific men are trying to do: they are trying to discover the laws of God, if you want to word it that way."

Professor Brown replied that among those who believe in the face to face method of worship are many people who are just as convinced of law as Professor Leuba and they believe that everything which happens to them in prayer and in the practice of this method takes place through law. But they believe that it is the law of the religious life; that for the highest results we should abandon the use of law we ordinarily follow in other

sciences for this method of immediate fellowship.

Professor Brown was asked: "Suppose a person felt he could secure these results by relationship with a friend or through some other process than worship, would you be just as willing that he should do it?" He replied: "Yes, because according to my philosophy, he would be communing with God in that way, but I think he would lose something out of his life by not knowing what the real significance was of what he was doing which the discovery of God would add to that experience."

Mr. Peltzer suggested that Professor Brown felt that among the conditions necessary to accomplish what Professor Leuba has been talking about would be this understanding that God is there. Rabbi Brickner asked if it is necessary to have an ear listening in when we pray. "Why can't my prayer be just as fervent as I express the admiration of this great universe, as I express a great hope that in communion and in fellowship with other human beings, I may remedy the evils there are in the world." It was suggested by Mr. Morton that, as a matter of fact, a God to hear is what people assume in worship and this is the way they act. It was questioned from the floor whether, because this is the present way people act, it is therefore inevitable.

It was evident from the discussion that part of the difficulty came because the assumption that God works outside of law is contrary to the assumption of many of those who would like to worship. Further, confusion had come because Professor Leuba was using "face to face relationship" as meaning this effort to get God to act directly outside of law, and Professor Brown was using "face to face relationship" as representing that experience of worship in which one gets in touch with a God who really does work through orderly processes.

Professor Smooker of State Normal

College, Pennsylvania, was called upon: "I am a biologist pure and simple with an almost incapacity for philosophy. From the nature of the questions, I suspect there are a few more like me here. There is an assumption in the average mind that if God does it, it is done in some unintelligible way; but that if we can understand how it is done, God did not do it. Theology is man's attempt to interpret God's revelation as we find it practically in the Bible. Science is man's attempt to interpret God's revelation of himself in nature. It is the same God, absolutely. If it were possible to interpret perfectly, in both cases, there could be no difficulty, if you had anyone who understood both sides of the problem. For the present, then, we must demand the right of the scientist to go on unquestioned in his researches. It is folly for us to run counter to the undisputed teachings of science. It is equally a mistake for the scientist to imagine that his present method of working is going to give us ultimate results. The greatest argument as to the proper relationship between science and religion, is the scientist who keeps up his religious life."

Professor Cole wished to know if philosophy has some unique sources of information that science does not have. Professor Brown: "No, it does not have any unique source, but it has a different method. It has, in other words, a method of testing by comparative value judgments which include the immediate intuition of quality as legitimate datum; whereas I understand science, which is purely analytic, proceeds by quantitative methods and for the purpose is ignoring the whole question of quality. That means that philosophy has limitations. It never can get outside of the subjective, and in the last analysis your philosophy is your bet on the universe and you may be mistaken. Religion is living out your bet, living out your philosophy. If you ask me what sources of information

philosophy has, I ask what sources of information you had when you fell in love with your wife. It is the same kind, exactly."

Professor Cole: "Mr. Chairman, I want to believe in God, and I like Dr. Brown's faith, but I confess if I want to think, I have difficulty in following Dr. Brown's suppositions, in his bases of religion. If I understand him, he wants to bar religion from the field of science, and facts that are recognized in the field of science do not seem to be sufficient evidence in the field of religion, and if I understand him, he has an overplussage of reality from some source beyond the field of legitimate science that he is able to lay claims upon, have fellowship with, and is convinced is God. And I am at a loss to understand the nature of that field of thought. When we take religion away from the field of science, some of us are not comfortable with the dualistic world views."

Professor Brown: "I am terribly sorry if I could have produced an impression so utterly remote from my fundamental conviction as evidently I have produced on my friend Professor Cole. There is only one world in which I live and it is a world with reference to every part of which science has free scope. But it is also a world that has something in it that I do not know how to describe except the experience of the whole. It is a world that I get at by way of appreciation as well as by way of analysis. Now I want to carry analysis up to the very limit, and I want to carry it into my psychology. I want to have my processes of prayer analyzed. But when I pray, I stop analyzing and I begin to appreciate. And that which I believe myself to appreciate is what Professor Wieman calls that part of our total environment which responds to us helpfully. My philosophy is simply the best picture that I can give of the impression that is produced by my experiences of this elemental reality, that

science analyzes, when I stop being scientific and try to appreciate it as a whole. Even in my philosophy I am scientific, I hope, in this sense, that I recognize I am not an isolated individual, that in the realm of value judgments in which philosophy moves I am one of a great company, and I want to check up my own judgment with the best experience of the race at every moment of time and be ready to revise it. If we have enough certainty by which to live, if the great hypothesis we are working out is based on all we know in science and is tested by it every moment, and if it answers to our deepest need and helps us to enter into social fellowship with other people and to help them, and if we are progressively defining all the time the great objects in which we believe, then I say I have gone about as far as I can toward getting a basis for my religious life that it is reasonable for me to expect."

The chairman of discussion commented in closing: "First, we have been using the word 'law' in two senses, one as if it were something that is rigid, and the other as if it were the conditions under which things take place. I think we must come to the use of the term as meaning orderly processes in nature and human nature, the sense in which Professor Brown and Professor Leuba have been using it. Second, may I suggest to you that we must follow further Professor Cole's question this evening because, if I understand the confusion, it comes in part in the definition of science. Is science concerned only with analytical processes, or is science, as Professor Northrop seemed to be insisting this morning, also concerned with synthetic processes? If it is concerned with synthesis, then the laws of appreciation are just as important as analysis and the conditions under which appreciation takes place can be discovered. The conditions under which love takes place can be discovered, and you do not deal with a hap-

azard universe even in the realms of appreciation. The papers of the evening will help on this problem.

"May I make a suggestion in regard to our mood? It would be easy for us to go from here to defend emotionally some experience. I wish we might go in the mood not of saying, 'I agree with Professor Leuba' or, 'I agree with Professor Brown,' or 'I believe this—or that,' but in the mood of re-examining earnestly our own experience in the confident belief that through our frank sharing of experience something better than we ever have known may come for us out of this convention. I shall not be satisfied unless the convention itself joins science and religion in a spiritual experience."

* * *

The Wednesday evening session considered the nature of science and of religion and their interrelation. What is distinctive in the contribution of science and in the contribution of religion? What is the relation between a person's science and his religion, between his religion and his science? The addresses were given by Professors Smith and Aubrey. (See pages 304-314.) At the close, the chairman of discussion summarized the state of progress of the convention's thinking as follows:

"It is evident that the papers and discussions of the day and evening have brought positive contributions in answer to the difficulties for religion in a scientific age as outlined on the opening session. At the close of discussion this afternoon there seemed to be agreement that we were ready to accept the assumption of science that this is an orderly universe and that we were ready to abandon an assumption of religion that results can be accomplished irrespective of orderly processes. In the evening address Professor Smith has followed this up positively by saying that religion must face the facts of science and not try to make adjustments easily, but actually build a

religious faith which takes science into account. The discussions during the day and evening say to the difficulties raised in the opening session by Dr. Pratt, as *Advocatus Diaboli*, that religion is willing to accept the challenge of science and actually remake its beliefs on the basis of whatever it accepts of science.

"The second contribution is the recognition that if we really want to make religion effective in the transformation of human nature and in the changing of social conditions we must use science. We cannot expect in a complex civilization that these changes will come about casually. Science must be the handmaid of religion, if religion is going to accomplish the good life. Professor Northrop this morning, Professor Leuba this afternoon, Professor Smith tonight, emphasized this.

"Third, we came to realize this afternoon that the forms of worship and the symbolism of religion, representing usually as they do a God who acts directly outside of law, are not an expression of the real beliefs of those who accept science. Professor Smith insisted that we have before us a remaking of our symbolism on the basis of the changes in our conceptions, so that our worship will really represent what we believe, and to this we must give ourselves immediately.

"Fourth, the earlier discussions seemed to indicate a distinct separation between science and religion, because the one represented analytical and critical processes, while the other was interested in synthetic and artistic results. Professor Northrop suggested this morning that science could not be complete until it reached the stage of philosophy, in which each individual scientific contribution found itself in relation to the total of experience. The chairman at the close of the afternoon session questioned whether science included synthesis as well as analysis. Professor Smith has said this evening that we have even in religion stopped with

the scientific in the sense of analytical and have forgotten that we are really dealing with the art of living, which is, after all, the process of bringing things together. Professor Aubrey has suggested that religious experiences, such as worship, involve a combination of the analytic and synthetic processes; that analytical and critical processes give greater control and meaning to the synthetic, and, in turn that the synthetic gives unity and value to the analytic. Therefore critical analysis and synthetic appreciation reinforce one the other.

"Throughout the day there has been an undertone of fear lest the basis of confidence which religion has offered as symbolized in God and prayer would be lost and that we could not have the same assurance which was true in a pre-scientific world. The evening session replies that assurance is possible, provided we face the facts of science honestly and remake our religion on the basis of facts as we know them, as people in other ages have developed religion on the basis of facts as they accepted them."

In the discussion Professor Robbins suggested that the present revival of interest in worship may be due to the desire to develop a more comfortable religion and to provide an escape. "I sympathize with the revival of worship, but I cannot help feeling that it is in grave danger of becoming separated from life and contributing to a stabilization of an inadequate social order."

Professor Aubrey replied: "The ethical test to be placed upon the process of worship is to be found in the content of meaning read into the symbol. If you have in your symbol that which, draws you away from the world, then that danger of which you speak is imminent. On the other hand, if the meaning read into the symbol on the basis of this critical analysis is a meaning of social values, then I see no objection to arousing the emotions in response to those social values.

We certainly believe in being enthusiastic about truth in science. That is distinctly an emotional attitude, toward a value which is critically tested."

Dr. Gamoran pressed what he considered the fundamental problem of the convention: "If we conceive of deity as working through natural law, then the question of prayer is serious. You do not pray to a law; you discover a law. You discover how it works and regulate your life in accordance with it. The question is this: Suppose a group of social philosophers formulate a set of social ideals and do not call them by the name of religion and do not refer to God as sanction; and suppose also that they command sufficient power to make those social ideals a part of the curriculum of all the public schools of this country. We shall have a system of character training and a system of teaching along the lines of developing ideals, but what function will there remain to the so called liberal churches? Why use the term religion and God, if they can accomplish the same aims through the use of the specific ideals which they wish to embody in life?"

The chairman of discussion said: "Dr. Gamoran leaves with us a question which will open the way for the discussion of tomorrow, when we are to consider the changes in conceptions and practices which the acceptance of science has made necessary. Some would say: 'Why not have prayer meetings in laboratories, in experimental schools, and in psychiatric clinics where persons are actually seeking to discover the laws of God and put them into effect? Why not consider worship the processes there, culminating as they often do in wonder and reverence in the presence of new discoveries of the marvels of nature or human nature?' Are we indeed facing not only a thorough going remaking of symbolism, but an actual re-examination of the very forms of religion? Must we be willing to search to discover whether there are other ways in

which we could pray and worship, which would be more effective than the more conventional ones we have used?"

"This has been a day of what I would dare to call worship, in the sense that it has been an earnest search in fellowship to understand one another and to lay hold of the realities of life. I have faith to believe that we have made progress both in our own fellowship and in laying hold on those things which mean most in our lives. In recognition of this day, I wish we might rise for a moment of silence and for our closing prayer."

* * *

The topic of Thursday morning was "Necessary Changes in Science and Religion." The papers were presented by Rabbi Goldman and Professor May. The suggestion that the issue was not really between science and religion but between different interpretations on the basis of science, which are really different religions, shifted the issue, as Dr. Gamoran pointed out in the discussion, from one between science and religion to what religion will we adopt on the basis of science. Professor May insisted that the changes in science itself had removed the conflict between science and religion and supplemented what Professor Northrop had said along this line the first day.

The discussion considered the differences the acceptance of science made in conceptions of God and in practices of prayer and worship. "How do people who are religious, but believe this is a universe of orderly processes, secure guidance, look for resources to reinforce life, face the future with confidence?" It was recognized that it would be perfectly possible to accept theoretically all that had been said about science and continue practicing religion just as before. Several of the papers thus far had outlined actual ways in which we now turn to science to tell us how to secure results which previously we depended upon prayer and worship to accomplish. "The

temper of a world of science is in accord with religion in its belief that nothing is impossible, but differs from traditional religion in saying that these results are not available for the asking, but only as the conditions are discovered and met. Just as fundamental adjustment is necessary in our beliefs and practices of religion as the result of science being accepted in our everyday lives in relation to disease, moral failure, and social transformation as came in relation to biblical criticism. What is the present religious basis of our lives?"

The gist of the testimony as given in the discussion was as follows:

Professor Smith: "Many people are very comfortable when they can feel that the processes of nature are just God's way of doing things, but would be a little uncomfortable if you were to say, 'Then God must be the kind of God disclosed to us by the behavior of nature.' Is God just the benevolent kind of being that liberal theology at least has tried to make him? Or is he, as Wieman suggests, a terrible God? Must religion, instead of soothing us, comforting us, and making us feel that everything is all right, must a religion in harmony with science lead us to find some meaning for the tragedies which we have to face, and stiffen us up? A God disclosed by the ways of the universe,—I wonder if we can actually come to that. Do we not have to come to think of ourselves as ignorant and to a large extent unguided gropers after a larger contact with God? We would then think of the task of religion as developing and enlarging the religious quest, that in our experience we may grow gradually into some adequate conception of God."

Professor Swift: "As I study these facts and laws and attempt as a human being to adjust my scale of values to them and to unify my own life in terms of them, I discover that many of them in human terms are brutal and unregarding

of that which in life is most worth while, and so I find myself confronted with the old dualism between good and evil. I can not find it easy to understand God in terms of the totality of the ways in which he behaves, if that is what we mean by scientific approach."

Mr. McLean: "Science has given me methods with which to strive for the realization of the biggest purposes in my life. They have proved so much more effective than prayer that praying in the ordinary sense seems absolutely a waste of time. If a person has a big enough purpose in this world, the trivialities of the metaphysics of the universe are not going to bother him a great deal."

Mr. Fairley: "I cannot sing the old hymns, but I am looking for a set of new hymns. John Addington Simons, for example, 'These things shall be,—a nobler race,' or Theodore Williams, 'When Thy Heart with Joy Sings a Thankful Prayer.' Those are hymns I can sing. I have not much use for 'Onward Christian Soldiers' and a lot of that militant stuff, but hymns which really express the brotherhood of men and the forward looking ideal of the human race. I can find an object of worship, too, in modern man. The finest experience of worship I have had in years was when I heard Stanton Coit of the Ethical Culture Society speak of the nobleness and dignity and sacredness of humanity."

Mr. Mason: "Part of our difficulty comes from looking for infallibilities. Both science and religion assume that they possess infallibility. The one fixed point where we can begin is that we believe in the trustworthiness of our human faculties to find truth in the outward world, and that we trust our spiritual faculties to bring us into contact with the realities of the spiritual world."

Dr. Sailer: "The little I know of scientific methods has been an immense help to me in past years, but I cannot understand any advantage that could possibly

be gained by ceasing to pray, unless you mean by prayer something that is an easy way to have God save you work, to pick up drop stitches. To me prayer means breadth of perspective and intensity of purpose. I think of God as representing that raised to the *n*th power, and consequently I feel in communion with a Being who has absolute breadth of perspective and intensity of purpose. Personally I can only testify that I gain by prayers, arid and dry as my prayers often are, what I think I can gain in no other way."

Dr. Gamoran: "If it is true that as we pray we say quietly to ourselves, 'Now I am using the term God. I don't quite mean what my audience means. I am using the term because it is a form of speech. I am asking God; I do not really mean I am asking God; I am simply expressing myself.' Doing this we are bound to develop a double standard which might lead to insincerity or even to hypocrisy. We must ask ourselves to what extent we really mean to take seriously the ideals which we uphold as virtues. For example, we say that humility is an important thing. Do we try to be humble, do we admire a man who is humble, or do we admire the fellow who arrogantly goes ahead and does what he wants and obtains success? To what extent, in other words, are we guilty of teaching one set of ideals in church or synagogue or school, and proceeding promptly to act as if we rejected those ideals and accepted a contrary set of ideals."

Professor Lorimer: "I find I am interested in trying to think through objective situations and in an experience of contemplation. In other words, there is a mood in my life in which I pass into the mood represented by Rabbi Goldman. But it seems to me it is a little ambiguous to call that prayer. May we not focus an effort on a practical program that will develop scientifically the values of beautiful living, and leaves this philo-

sophical conception of God, which I heartily share, out of the practical program?"

Professor Cole: "Whatever scientists say about the make-up of my children, I am going to continue to play with them. However science may analyze the technique of music, I am still going to enjoy listening to good music. I relate myself in various ways with this great universe, just as I do with my children. When I do it, I am religious. Whatever science may say, I should hate to feel we are going to apologize, as religionists, for what science has told us about the universe. I think we should go on being religious in relation to the universe. There is still a use for the concept of God in our practical behavior in relating ourselves in helpful ways with the great Other."

The chairman of discussion summarized: "Whether we have called it God or not, whether we have called it prayer or refused to call it prayer, we have been sharing experience this morning in three regards: first, in regard to what we really believe we can count on in the universe; second, in regard to the methods by which we lay hold on the resources in the universe on which we count; third, in regard to that to which we are willing to give our lives and in which we believe.

"The morning discussion has considered not what science robs us of, but what science furnishes us in knowledge of the resources on which we count. Even artistic appreciations are dependent upon scientific understanding. It has been clear that people are finding more ways of laying hold on resources than previously. Whereas before we confined ourselves to a particular type of prayer, the testimony of the morning gives many methods of a laying hold of these resources. Nobody has spoken from the viewpoint of the scientific laboratory, but many scientists would testify that in the laboratory they are seeking to discover and lay hold of the resources about which

we have been talking this morning. This Religious Education Association itself, according to Professor Coe, grew out of a period of three days of earnest search to discover what to do to meet the Religious Education situation, culminating in an experience in every way creative. Professor Coe has said these three days were the greatest experience of worship of his life."

* * *

The Thursday afternoon session turned from the consideration of the changes in personal religious belief and progress to the necessary changes in religious education itself. Papers were presented by Dr. Hartshorne, Mrs. Fahs, and Professor Yokum. (See pages 327-343.) The chairman of discussion summarized the problem: "Dr. Hartshorne's paper has outlined the possibilities of the use of science in religious education; Mrs. Fahs and Professor Yokum have presented two contrasting ways of applying science to religious education. Mrs. Fahs has suggested that science be applied by giving children an attitude of search, and by training them in the process of thinking and deciding, so that they become more and more individuals who can be trusted for independent decision. Professor Yokum has suggested that science be applied in the analysis of the most important virtues which have been developed in the race, and that by means of practice we should, through succeeding stages of difficulty, bring children to the place where we can count on their practicing these virtues in life.

Mr. Marriott said that Mrs. Fahs had brought us to that for which many had been waiting. "So far in the convention we have been largely airing our own adult conflicts and difficulties, and very little illustration has been brought from the child, where it seems the greatest progress can be made, viz., in schools where freedom is given to the child to develop in this process of which Mrs. Fahs has

told us. On practical grounds we now face the question fairly: Do we want a scheme of education based upon this education in freedom, where the child discovers something for himself, or do we want direct character education? There can be little question that the school where this new process method is in vogue is developing the deeper spirituality. If you want another illustration of this, read the wonderful story of what Nell Curtis is doing in her class in New York City. The last number of *Progressive Education* tells a part of that story and gives the wonderful thanksgiving hymn that grew up in this—not a school of religion, but an ordinary school. The question I would like to ask Mrs. Fahs is, where are we going to get teachers who will do this sort of thing?"

Mr. Bridgman suggested: "Mrs. Fahs doesn't get them; she trains them in her school."

In reply to questions regarding a possible curtailment of the church's program of religious education because of extra church agencies, Dr. Hartshorne indicated this would depend upon what the public school and other agencies were doing in the local community. "Where day schools are progressive and children are actually being trained in the ways we have been discussing as characteristic of religious education, it seems a waste of time and effort for the church school to do over again poorly what day schools are already doing five days in the week. The church school would there confine itself to more direct religious matters. On the other hand, there are many public school systems where the children have no experience with modern methods. Under these circumstances the church, interested in the development and freedom in the interest of religion, is bound to spend more time in progressive methods under its own auspices."

Several questions were asked Professor Yokum. Professor Starbuck wished to

know whether there was an agreement about the cardinal virtues and Professor Yokum indicated that he felt they should be determined by scientific investigation. Mr. Aiken thought that virtues such as self sacrifice, did not run through a number of situations, but were only attached to specific ones, and that to develop them as general virtues would be difficult. Professor Yokum replied that if each was associated with great, typical situations we would develop the strength to meet that kind of typical situation. Challenged by Mr. Douglass on the basis of the number of specific situations necessary because of the law of transfer, Professor Yokum questioned the limitations of transfer and felt that virtues could be developed as great complexes in life.

Professor Huff of Des Moines objected to the unscientific, anti-social, and useless material included within the regular lessons as taught in the church. Professor Limbert said that there were underneath Mrs. Fah's method two fundamental, philosophical principles, "first, the need for developing in children a capacity for independent thinking and judging and acting; and second, what one might call sensitiveness to human values and needs. These two principles contain within themselves the antidote against standardization; that is, they are principles upon which one could engage in creative living and in this quest of which she spoke. Perhaps in these principles we may be approaching a harmony or unity between science and religion."

The chairman of discussion again summarized the issue which had been discussed: "We are in the midst of a period of experimentation, partly as to what is possible and partly as to what we really want to have happen or what our phil-

osophy of education will be. We must examine the proposals of Mrs. Fahs and Professor Yokum on both bases, their practicability and their desirability. Religious education is at a forking of the road. Shall we try to discover virtues, ways of acting which the race has found desirable experimentally, and then multiply the drill and experience so we more or less meet the problem of transfer? Or shall we train children in meeting situation after situation in the light of experience of the race and by the processes of thinking and experimentation, and thereby develop persons whom we can trust because we think they are able as adults to think and act for themselves? American religious education is experimenting with both methods. One is the effort to conserve and to make operative the virtues or the ways of living which we agree upon. The other is the method of making people able to be critically minded and to face questions. By the first, you will have more uniformity, if you succeed; by the second, you will have a considerable variety of judgments. At the moment both radical and conservative American religious education includes both of these.

"Tomorrow, Friday, will be given to a consideration of experimentation. A very forward looking minister said in my presence within the last few days, 'I am for modern religious education, but I want to tell you it puts a strain upon the minister and upon the teachers that former religious education did not bring. Unless actual help for the average teacher is developed we are never going to be able to make the grade on modern religious education.' Tomorrow we continue the work of this afternoon, in an examination of experimentation and its results."

RESEARCH DAY IN THE CONVENTION

I

LEGITIMATE FIELDS FOR RESEARCH

ADDRESS OF PROFESSOR ARTHUR E. HOLT*

I ALWAYS like to begin an address with tact, so I am raising first the question—"Why is it that the departments of religious education and the departments of practical theology have such slight academic standing on the university campus?" Harvard, for instance, refuses to give credit for work done in religious education, while at the same time historical disciplines like church history, New Testament, and Old Testament have no trouble in securing academic credit.

The answer to this, I think, will contain the answer to another question—"Why is it that religion, in the popular mind, gets identified with archaeology?"

It also contains the answer to another tendency which no doubt some of you have noticed. I can illustrate the tendency better than I can name it. The author of this paper was not long ago reprimanded for having bound for the seminary library the last three years' issue of a modern country newspaper. It is quite certain that if these newspapers had been two thousand years old, I would have been publicly thanked instead of being "privately spanked," and would probably have been given an honorary degree at commencement time.

One other illustration. A member of this convention not long ago went to the librarian of an "East of the Hudson" seminary and asked for a copy of a modern atlas. He was told that the seminary library contained no copy of a modern atlas, that such literature was found only in the university library.

Now the reason for all this, I think, Dear Brutus, lies not "in our stars but in ourselves that we are underlings." The

historical departments have developed a technique for studying the church of the past, but we have not developed a technique for studying the church of the present. The historian knows his source documents, he knows adequate methods for drawing conclusions from these documents, he has a corresponding standing in academic circles, and, what is often more distressing, he has right of way in the allocating of university budgets.

The practical departments, on the other hand, have not a similar equipment for studying the religious life of the present. We have not one library of original documents, we have not developed a technique for studying these documents, and we have to contend for all distribution of research funds in our direction. So long as we leave this prestige in the hands of the historical disciplines, religion will continue to be classified with archaeology, theological students will know why farmers and villagers staged a revolt in 1000 B. C., but they will be totally oblivious to the rural-urban conflict in 1928. This much by way of emphasis.

A few words by way of delimitation of our task. We are interested in the religious phase of modern life. If I may, I shall use a very crude illustration. When Pasteur started out to study fermentation, he sought to isolate the germ which caused fermentation. He then sought the conditions which worked for its growth, and those which did not work for its growth. Something like this, it seems, we are trying to do. We are trying to isolate the "religious germ" in human experience, to discover its significance, the conditions under which it propagates, and the conditions where it will not develop. Research work means

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adequate knowledge, on the basis of which valid conclusions can be made.

One word as to kinds of research. We seem to have created two general classes—pure and applied, remote and immediate, indoor and outdoor. In all these classifications I seem to see distinctions based more or less on method and use, but I do not believe that any one method can succeed without the help of the other. For instance, my friend Glaze decided to test the religious and mental values in fasting. For 22 days, with the help of all testing methods and equipment of the University of Chicago, he kept a record of what happened to a man who went without food. Valuable as this was, it was very evident that he threw very little light on what would happen to a man if some one compelled him to go without food, or if he had gone without food under less hygienic circumstances. Or if one thinks that laboratory experimentation is not different from outdoor experimentation let him read the story of Pasteur's first application of the serum he had devised in his laboratory for the cure of hydrophobia to a boy who had been bitten by a mad dog. The boy under treatment recovered, but Pasteur nearly died of anxiety.

There is a limitation implied in our subject in the word "legitimate." Here, in addition to the fact that we are limited to research in the field of religion, we ought to limit ourselves to those areas which are likely to prove rewarding and to those fields where it is possible to secure objective material which can be analyzed and checked. There are a good many fields about which we may have curiosity which would not classify as legitimate fields of research.

There are certain fields which seem to me both profitable and possible:

The first is the field of recruiting and training of salaried religious leadership. Research into methods of training religious leaders should be a major interest for us. This field has been partly ex-

plored by Dr. Robert Kelly in his book, *Theological Education in America*, but there is room for further work. Such a study should include items like the following: Source, supply, and methods of recruiting of religious leadership; present equipment and methods of educating religious leadership; the present status of religious leadership in the United States. This would include a study by areas of all religious leaders, their education, ethical standards, living conditions, and institutional equipment.

Fortunately, this study is contemplated by the Council of Theological Seminaries in conjunction with the Institute of Social and Religious Research. Real help might also be secured from studies made in other fields, for example from the studies by Professor Merriam in political and economic leadership.

Closely connected with the above is the field of voluntary unpaid religious leadership and the equipment which this leadership uses, which is typified by the Sunday school. We need study in this field. While I am perfectly certain the International Council of Religious Education is preparing to undertake it I wish to call attention to what Dr. Flexner's field study of medical standards revealed. Dividing medical practitioners into classes A, B, and C, Dr. Flexner discovered that the present high standards of medical education had increased the number of men who graduated from institutions in class A, but in the average community had multiplied the number of practitioners who were in class C or below. It may be that a similar study of standardization movements in church school work will reveal that we have produced an increase of workers who are in class A but have so isolated them from the people that the number of people who are led by class C and D leadership will be increased.

The second major grouping in research must lay the basis for what we are trying to do in religious education. Here the necessity for measuring rods in the realm of character development is a crucial

matter. Chave and Thurstone are achieving some results in this field, through the development of a test of attitudes toward the church.

It seems to me we must recognize the legitimate character of the explorations carried on by the Foundation for Character Education. This general heading is manifestly so inclusive that it is hard to conceive any exploration in religious research which might not be included under it.

The studies will be organized around measuring of character, the conditions under which character is modified, and the possibility of modifying character under the means at the disposal of religious forces in conjunction with other social forces. In this field pioneer work is carried on by Hartshorne, May, Starbuck, and others.

A third area which is at present almost a free and unoccupied field, but which is nevertheless of great promise, is the whole field of what for lack of a better reason I call the "pathological." To a certain extent religious education has busied itself with the normal and the field I now have in mind could be classified as the "abnormal." Mr. Boisen has called attention to the fact that medicine has progressed by the study of the abnormal. A high school near my home trains boys in mechanics by allowing them to remodel "broken down Fords and automobiles." I need only to call attention to the work of Healy and Bronner, of Adler, Shaw, and many others, to show the fruitfulness of this approach.

Two ventures in this field seem promising—the first is that of Rev. A. T. Boisen, Chaplain of the Worcester State Hospital, whose work in religious phases of mental disorders has won the praise of such men as Healy, C. M. Campbell, and others. Another study which will, I think, be heard from is that of Mr. Sutherland who, in connection with Mr. Shaw of the Institute for Juvenile Research, is studying the religious phases of juvenile delinquency among Negroes.

A fourth field of experience in which religion manifestly plays a part and in which there is considerable objective material is the field of vocational experience. Heermance of New Haven and Landis of the Federal Council of Churches have been working in this field for a number of years and their papers at the last meeting of the American Sociological Society reveal the richness of the field of study. Tawney in his *Religion and the Rise of Capitalism*, continues and amplifies work already begun by Weber and Troeltsch. An American student in the field comparatively unknown is Maurer of the Lewis Institute in Chicago. Professor Paul Douglas of the University of Chicago, with Maurer and the Social Ethics department of Chicago Theological Seminary, have begun a five year study in this field and hope in due time to make their findings available.

A fifth field might, perhaps, be included with some of the others. For lack of a better name I call it the "psychology of church experience." How shall we gather records of churches and of church experience? What happens to people when they join churches? What happens to people when the churches they have joined disintegrate on their hands? What happens to people when they join certain kinds of churches? What happens to a man when he listens to sermons, sings the church hymns, accepts as his own the church ceremonies at conversion, marriage, and death? What happens to a man when he does not expose himself to this influence? Evidently a new apologetic for religion must be worked out in this realm. Kincheloe's case studies in the "Behavior Sequence of Dying Churches" will probably make a contribution in this field. Here it is evident that not only do churches disintegrate, but church members personally disintegrate with their churches. Under this same classification would come studies in some of our smaller religious groups like the Quakers, Mennonites, Mormons, and Christian Scientists.

A sixth area in which research is warranted is the ecology of a community and the natural history of religious groups. What happens to churches which are planted in communities with foreign religious traditions? The old American population of Chicago lies in five major sections extending out from the loop. This population planted Methodist, Baptist, Presbyterian, Episcopalian, and Congregational churches. In between these sectors are large population groups planted by Chicago industries and determined in their religious faith largely by whether Chicago industry was drawing its labor supply from North Europe which was Lutheran, or from South Europe which was Catholic or Jewish, or from the rural South which was Methodist or Baptist. Add to this the fact that most of our church planting was what might be called village planting, and there appear the complex data which go into the equations from which a modern community commission must work out its formulas for a "Cooperating Protestantism."

Some time ago a student began to study the natural history of a church on the northwest side of Chicago. This church was once a village church on the edge of the city. It was the center of the community. Then the city began to flow out over it. First the Northwestern Railroad tracks were elevated and this divided the village and isolated to a certain extent half the constituency of the church. Then the Clark Street car line was extended, and shifted the business section two blocks west. Then a Swedish population flowed into the town and built a large church with a community house. This process was concomitant with a series of quarrels in the church which generally ended by the assassination of the minister. It was perfectly evident that the church had not had a "spiritually minded" minister since the railroad track was raised.

On the other hand, there are other areas where the outward flow of the old American population always keeps the

Methodist, Baptist, Congregational, Presbyterian, and Episcopal churches full. These churches have ministers who have never lost their "spirituality." We elect their ministers to positions of natural leadership, and the missionary boards call them "leading churches." A leading church is a church which gets most of its membership from some place else and gives large gifts to benevolences.

I know of no more important piece of research which needs to be made than this study of the natural history of churches. It will give an entirely new interpretation to our missionary societies. These organizations might be called Equalization Societies, and should have as their purpose the distribution of the strain of the population shifts of a city in a way which will be born by the whole corporate body of Protestantism.

By this partial enumeration of legitimate fields for research I have laid the basis for certain conclusions. If what I have been saying be true, we need a shift of emphases in modern religious training and teaching, which may be summarized briefly as follows:

We need a new belief on the part of seminary boards of trustees and religious foundations in the necessity of studying religious life and conditions in the present. This belief should make itself real in terms of available money for research. We need not one Institute of Social and Religious Research, but many, wisely distributed over the United States.

We need an acquaintanceship among those who are making these studies, an acquaintance institutionalized in a Council similar to the Social Science Research Council. The purpose of this Council should not be to conduct research but rather to encourage and guide those who are occupying frontier sectors in this field.

We need a reorganization of seminary libraries. If the present libraries can not be liberalized, we need separate libraries which will not be afraid of anything as

green as a modern atlas. These libraries ought to contain source documents for the study of religious experience in the present. I do not mean that they should contain books written by people who have studied source documents, but source documents themselves, so that students can go to the sources for a study of present day religious problems, as they go to the sources in biblical and church history work.

We must have laboratories indoor and outdoor where studies pertinent to religious discovery can be carried on. It is an interesting fact that it was a student in the department of education who carried on an experiment in fasting. Unless conditions change, I am quite prepared to wake up some morning and find out that

some "godless state university" has conducted an experiment in prayer and knows more about prayer than any theological seminary in the country. It contributed nothing to my self respect to find out that the theological seminaries, when they started out to make their study of seminary education in the United States, had to go over into the field of general education to find a director.

I do not accept the thesis of some that research belongs to the university and not to the seminaries. I believe that first hand study belongs in the realm of all good teaching, and that every self respecting religious institution must carry its share, determined by its ability, of first hand study into the religious life of the present.

II

AN EXPERIMENTAL STUDY IN CERTAIN COOPERATIVE TENDENCIES*

REPORT OF DR. JULIUS B. MALLER

PROBLEM

THE purpose of this research is to investigate the effect of two types of incentives upon two types of conduct. The first incentive appeals to purely selfish interests and the second appeals to class or group interests. The first type of conduct is persistent effort in a group project and the second is self denial for the good of one's group, or, more briefly, helping and giving.

The research is divided into two parts:

1. To find a measure of the effort exerted by children in such activities as writing, cancellation, arithmetical computation, or running, at top speed, when the goal is a personal or selfish one and when the goal is a social one—benefiting a group, class, or team.

2. To find to what extent a child will share voluntarily the product of his work with his group if withholding it would

increase his personal gain.

This report is limited to the consideration of only one type of activity, namely, arithmetical computation.

PROCEDURE

Some 1400 children were tested for their speed in simple computations. Four scores were obtained for each child, each one being the average of a number of tests:

1. A score of *practice* or ordinary speed as in classroom work.

2. A score for speed in competing for a prize. Prizes were promised for all those who would increase their speed over what they did in practice work. Each child, no matter what his initial speed, had a chance to increase his speed and was working under a personal incentive—to win a prize for himself. The self score is the average of twelve of these tests.

3. A score for speed when working for the class. An inter-class contest was

*Dr. Maller, Research Assistant at Teachers College, here reports briefly one phase of a more extended doctoral research which he is conducting, in cooperation with the Character Education Inquiry.

arranged. Each child was to work for his class. He was not to sign his own name on his papers, but the name of his class, as for instance 7B or 8A. The writer of each paper was found by an identifying symbol on the sheet. The class score is an average of twelve such tests.

4. A score of self sacrifice. At the end of the two contests (intra-class and inter-class) each child was given an opportunity to go on working either for himself, to increase his own score, or for his class, to increase his class score. The tests consisted of seven units of work, one minute each. Before beginning each unit, the examiner said, "You may do this minute's work for yourself or for your class. If you would work for yourself, put your name at the top of this page. If you would work for the class, put the name of your class at the top."

Table I shows the result with 824 cases.

TABLE I
Mean Scores of 22 Classes in Practice, Self Work, and Class Work, and Percentage of Contributions Made to Class.

Class	No. of pupils	Practice	Self	Class	D (S-C)	% Contributed to class
A	46	41.2	42.1	40.7	1.4	43
B	47	57.6	58.7	55.6	3.1	17
C	45	50.1	55.6	55.0	0.6	36
D	46	58.2	63.1	54.1	9.0	29
E	42	51.7	58.6	50.7	7.9	37
F	43	54.6	71.3	68.1	3.2	43
G	45	55.6	47.8	38.5	9.3	24
H	37	32.9	33.8	32.2	1.6	20
I	32	36.2	37.7	35.4	2.3	23
J	34	43.6	42.9	39.0	3.9	23
K	37	21.9	28.8	27.0	1.8	21
L	41	23.8	30.4	27.9	2.5	17
M	42	28.6	36.4	32.8	3.6	37
N	37	34.5	40.8	40.7	0.1	19
O	34	34.4	39.2	39.4	-0.2	23
P	32	26.1	31.4	31.0	0.4	37
Q	28	36.9	38.1	38.3	-0.2	34
R	41	38.3	41.6	39.5	2.1	24
S	34	45.0	51.0	49.7	1.3	40
T	41	44.7	48.2	46.8	1.4	53
U	15	37.8	45.8	43.0	2.8	20
V	25	52.0	54.6	54.4	0.2	41
Grand Means	37.5	41.2	45.4	42.7	2.7	30

In twenty out of the twenty-two classes the mean of self work is higher than the mean of class work. The mean of means of the latter is 2.7 lower than that of the former. The 824 children worked on an average 2.7 examples fewer per minute, or 32.4 examples fewer during the twelve tests, for class than for themselves.

That this difference is not due to chance fluctuations is seen from the fact that the difference between the "self" and "class" means (2.7) is four times the sigma of the differences of the two sets of scores (0.7). That is, if this test were given to this population 10,000 times the mean for the work for self would be higher than the mean for the class work in 9997 out of the 10,000 tests.

To take the absolute score under either of the above incentives as an index of the work for self or work for group and to compare different individuals or groups only on this basis would be unwarranted, for individuals differ widely in initial speed and skill in each of the activities utilized.

An individual's output of work under any incentive consists of two elements: (1) The amount due to general skill and (2) the amount due to the incentive. In order to find the amount due to the operation of the incentive, we must subtract the amount due to skill and habituation from the total output when the incentive is functioning. This involves the finding of the output when no incentive is functioning—or output under zero incentive. In this research the output under zero incentive is taken as the work done under practice at the ordinary rate of classroom work.

The gain in speed for self over practice speed has been called the pure self score (S'). The gain in speed for class over practice has been called the pure class score (C'). The ratio of the S' and C' scores has been taken as an index of the

child's "cooperativeness," i.e. the extent to which he works for his class in terms of what he does for himself. For this population the C' score is 1.5 and the S' is 4.2. The C' is thus only 36% of the S' . The class motive is only 36% as intensive as the self motive.

It is noteworthy that the average percentage of contributions given to class is 30%, which closely approximates the average amount of effort put forth in working for class.

The above comparisons of speed of work are based on averages of twelve tests for self and twelve tests for class. If we compare the work for self and the work for class during various intervals in the progress of the tests we find further significant contrasts. While the rate of work for class is nearly equal to the rate of work for self during the first few tests, it constantly decreases with the progress of the tests. The work for self, however, does not decrease but very often increases. These facts are illustrated by Table II.

TABLE II
COMPARISON OF INCENTIVES IN
SUCCESSIVE TESTS

Showing the mean speed caused by the incentive of self, S' (self minus practice) and the incentive of class, C' (class minus practice), during the progress of the twelve tests. Also the difference between the two incentives, $S'-C'$, and their ratio, $\frac{C'}{S'}$.

Test	S'	C'	$S'-C'$	$\frac{C'}{S'}$
1	4.8	2.9	1.9	.60
2	2.8	1.4	1.4	.50
3	3.9	2.2	1.7	.56
4	3.8	1.7	2.1	.45
5	3.9	— .5	4.4	— .13
6	4.0	— 1.3	5.3	— .33
7	8.2	— .2	8.0	— .02
8	5.5	— 1.0	6.5	— .18
9	3.8	— 3.3	7.1	— .87
10	2.8	— 2.4	5.2	— .86
11	3.5	— 3.1	6.6	— .89
12	4.3	— 3.9	8.2	— .91

If the tests are divided into four groups we find the following ratios of C' to S' :

1st 3.....	.55
2d 3.....	.00
3d 3.....	— .36
4th 3.....	— .89

From this it may be seen that the incentive of working for class calls forth in the first few tests an effort better than during practice to the extent of 55% of what the incentive of working for self does. At the end, however, the work for class falls *below* that of the practice to the extent of 89% of the distance the work for self rises above that level.

The self r obtained by correlating the S-C differences between the even number tests with the S-C differences between the odd numbered tests is $+ .91 \pm .01$.

The correlation of these scores both with intelligence and age is positive but low (about .20). The r 's with such factors as honesty, persistence, and non-suggestibility are much higher (about .60).

CONCLUSIONS

1. Helpful and self denying acts in the specific situations here described can be measured reliably.
2. The scores on this test approximate a normal distribution.
3. The essential difference between the two incentives seems to be the persistence of the self motive and the dwindling of the class motive.
4. There is a significant difference between the average speed of the children when working for class and the average speed when working for themselves in favor of the latter.
5. The increase in speed due to the class motive is on an average one-third of the increase in speed due to the self motive.
6. When an opportunity is provided to contribute part of the product of their work for the benefit of the class, about 30% of the total amount is contributed.
7. Behavior in situations involving cooperativeness correlates with behavior involving honesty, persistence, non-suggestibility, and opinion of friends to a greater degree than with such factors as chronological age and intelligence.

III

A NEW TYPE OF SCALE FOR MEASURING ATTITUDES

REPORT OF PROFESSOR ERNEST J. CHAVE*

IT IS difficult to get an exact definition of an attitude, although we all recognize attitudes, differentiate between them, and work to produce them. In fact, in religious education one of the chief goals is to change, develop, and control both individual and group attitudes. Without quibbling over terms let us state that we regard an attitude as a complex, a complex of feelings, desires, fears, convictions, prejudices or other tendencies that have given a *set* or *readiness to act* to a person because of varied experiences. In religious education the concern is for the development of attitudes toward God, toward prayer, toward the institutions of religion, toward the total meaning and worth of life, toward the ordinary tasks and responsibilities of life. This, of course, involves the change and development of attitudes that grow up in the course of widening social relationships, and one of the problems is to know how far the processes of religious education affect them. Can certain types of attitudes be developed, can we know at any time how far development has progressed, can we know what techniques and influences are best adapted to cause desired changes? Any device that will aid in an accurate description of an attitude, and especially that may measure change or shift in attitudes, will be welcome.

For some time Professor L. L. Thurstone of the Psychology Department of the University of Chicago has been experimenting and writing on phases of this problem. In the last year he has taken over a technique from the field of psychophysics and applied it to the job of measuring attitudes.¹ It promises a distinct contribution in this field. The writer of this article undertook some months ago

to work out a particular experiment with Dr. Thurstone on the development of a pattern scale that might be of direct value in religious education. In the next few months a monograph will be published setting forth the details of the theory and results of this experiment. A brief report on this was given at the Philadelphia Convention and is recorded here.

The scale developed was entitled "A scale for measuring attitude toward the church." The way in which it was produced and the values of such a scale are roughly indicated without the use of supporting details of data, graphs, and tables.

In the first place, the peculiar contribution of this new type of measuring instrument may be suggested by an analogy. A yard stick is a linear measuring instrument with 36 divisions called inches marked plainly on it. If I say a table is 21 inches long we all have a fair idea of what is meant. Now the essential thing for a common understanding of this index figure is that the divisions called inches, the units of measurement, shall be equal. If the yard stick were divided into 36 unequal divisions, each of which was called an inch, it would be of no use as a measuring instrument in terms of inches.

The means so far offered for measuring attitudes are more or less like that measuring stick of unequal divisions. No unit of measurement has been clearly defined, so that neither relative positions on a scale, nor distributions of an attitude, were significant. In this new scale the unit of measurement is the important factor. One method has been to choose a list of statements of attitudes, place them in rank order by taking the average placings of a number of judges, and then count the endorsements for each statement. That is all right as long as the results are not interpreted as a frequency

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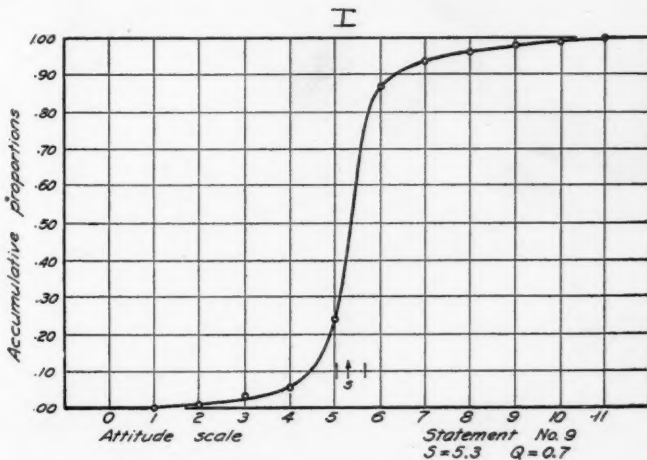
1. L. L. Thurstone—"Attitudes Can Be Measured," *The American Journal of Sociology*, Jan. 1928. Vol. 33:529-554.

distribution. By adding or subtracting certain statements and arranging the results along an evenly spaced base line the distribution can be caused to take almost any shape. Bar diagrams alone can represent the results of such a test.

The first step in this experiment was to get a large variety of statements of attitudes toward the church. From many different sources we chose 130 and edited them until we felt we had a rough representation of the varying degrees of attitude extending from some very strongly in favor of the church, through a neutral zone, to some very strongly against the church. By an attitude toward the church we meant the resultant tendency in a person, from his experiences with churches, that might color his attitude toward any church, and so might be called his attitude toward the church as an institution in society. A revised form of this scale is now being developed that will be used to measure a somewhat more specific attitude—"Attitude toward the best type of church I know." But the reactions of the vast majority of persons who were tested by the present experimental scale were definite and the results quite clear in their indications.

Each of the 130 statements was mimeographed on separate slips of paper and bundles of them were sorted in random order, placed in an envelope with directions and given to various persons to distribute in rank order. The device was used of reducing the rank order sorting to a distribution into eleven piles. The end piles were labelled and the neutral or middle pile, but the others were only lettered. The letters ran from A, the pile labelled "Strongly in favor of the church" to K, the pile labelled "Strongly against the church." The directors said the eleven piles were to represent the varying degrees of attitudes for or against the church expressed in the 130 statements. Three hundred persons sorted the slips, taking in each case about an hour to do the sorting. The persons were chiefly students from various departments of the University, but a good number of outsiders were included.

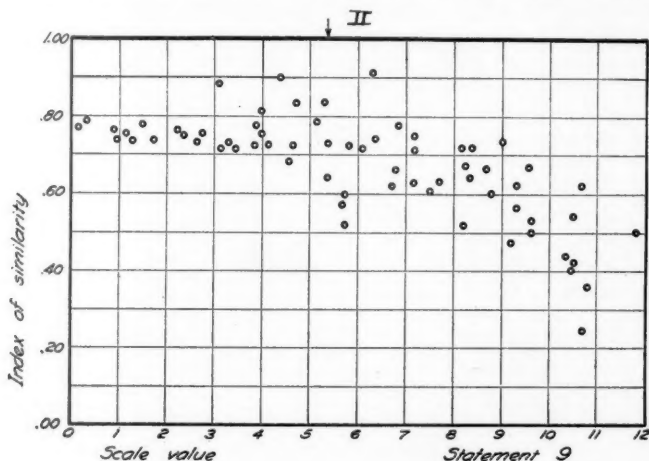
The results of this sorting were tabulated. Curves were drawn to show how each statement had been placed by the 300 sorters. A diagram (I) will indicate what is meant and will show how scale values were derived. Statement No. 9 read "I don't believe church going will do anyone any harm." The graph



shows that it was placed rather uniformly in the neutral zone. Where the cumulative-proportion curve crosses the 50% level the point is right above 5.3 on the base line, and this is taken as the scale value of the statement. Similarly the scale value of every one of the 130 statements was obtained. The Q-value, difference between the scale positions of the points where the curve cuts the 25% and 75% levels, gives a measure of the ambiguity of the statement, or a rough indication of the tendency of the sorters in placing the statement. In this case it is 0.7 and is easily seen to be a good measure of tendency, for the great majority of the sorters put it in the middle pile. In contrast to this take statement No. 8, "I believe the church has a good influence on the lower and uneducated classes but has no value for the upper educated classes." In drawing its graph we find it has a scale value of 6.7 and a Q-value of 3.6. It is what we call a double-barreled statement and proves to be very ambiguous. This objective measure of ambiguity suggests that it ought not to be included in a final scale. Endorsement of such a statement would not at all accurately place a man.

One other diagram will illustrate how

personal judgment was reduced to a minimum in the selection of statements that should be included in the final instrument. We used various criteria of ambiguity and of irrelevance to test the statements after the scale values had been obtained. Many of these criteria were developed during the experiment. Some statements that we knew ought not to be included were left in the list of 130 in order that we might see if they could be cast out by objective criteria. This was done most satisfactorily. The diagram (II) given is a sample graph of a method devised by Dr. Thurstone to test the similarity of each statement that was considered for the final scale. Three hundred persons were asked to mark those of the 130 statements they fully agreed with and the results of this checking were tabulated. (Note that in the first sorting the persons were not asked to consider what statements they endorsed.) Statement No. 9, described above, in this diagram shows that it could be endorsed by people whose scale position would range from those most strongly in favor of the church to those most strongly against the church. This graph shows that 80% of those who endorsed the statements scaled as most strongly in fa-



vor of the church also endorsed this No. 9 and even 50% of those who said "The church is a parasite on society," the strongest anti-statement, also endorsed No. 9. That is, the statement which seems to be a fine neutral one will not be of value to use on a scale where endorsements are to be asked for. This is, of course, clear from the wording of the statement "I don't believe that church going will do anyone any harm."

The unit of measurement in the above scale is seen to be one-eleventh of the base line. We might have had coarser or finer divisions. That is immaterial. But the method suggested above shows that the divisions are equal. The scale is so constructed that two statements separated by a unit distance on the base line seem to differ as much in the attitude variable as any other two statements in the scale which are separated by a unit distance (The full statement of the theory underlying this will be given in the monograph to be published shortly by Thurstone and Chave.) In the experimental form of the scale four statements were selected for each of the eleven divisions. These were chosen, as stated above, by reference to the scale values determined for each of the 130 and as tested by the criteria that were built up in the process of the experiment.

The reliability of the scale was checked by making two forms A and B in which two statements were taken from each of the eleven divisions and equated against two others in each of the eleven. In a test of 203 freshmen of the University of Chicago a correlation coefficient of .848 was obtained for the two forms which, according to the Spearman-Brown formula for the whole test, means a reliability of .92. Other checks for reliability and for validity have been made and will be described in the monograph.

One other diagram will indicate the possible use of this type of scale. The experimental scale was given to about

1200 students of the University of Chicago and to an audience of the Chicago Sunday Afternoon Forum. The graph (III) shows the percent of each group in the various divisions of the scale. Each ordinate expresses the proportion of the whole group found in any class interval, each area being reduced to unity. The small arrow on the base line of each distribution shows the arithmetic mean of the distribution. Comparisons can easily be made and numerical indices used.

The scale as constructed will be of assistance in at least the following five diagnostic indications:

1. Give the position of an individual on the scale. The average of the scale values of the statements he endorses on the test form will serve as an index figure by which he can be compared to others.

2. Give the range of his endorsements or a measure of his tolerance. It might be roughly indicated by the Q-value of the range of his endorsements.

3. Give a picture of the distribution of attitudes in a group and the central tendency of the group. Each ordinate at the middle point of each division of the scale would indicate the proportion of people in the group who endorse the statements of that division, expressing the degree of their attitude for or against the church. A comparison of groups could be indicated by the numerical values of their central tendencies.

4. Give a measure of the heterogeneity of the group in relation to the attitude variable. It could easily be indicated by the measure of variability of the distribution.

5. By a test at the beginning and end of a procedure in religious education to change the attitudes of a group toward the church, a measure of the shift could be quickly obtained and a comparison of graphs would indicate in what way the shift was made.

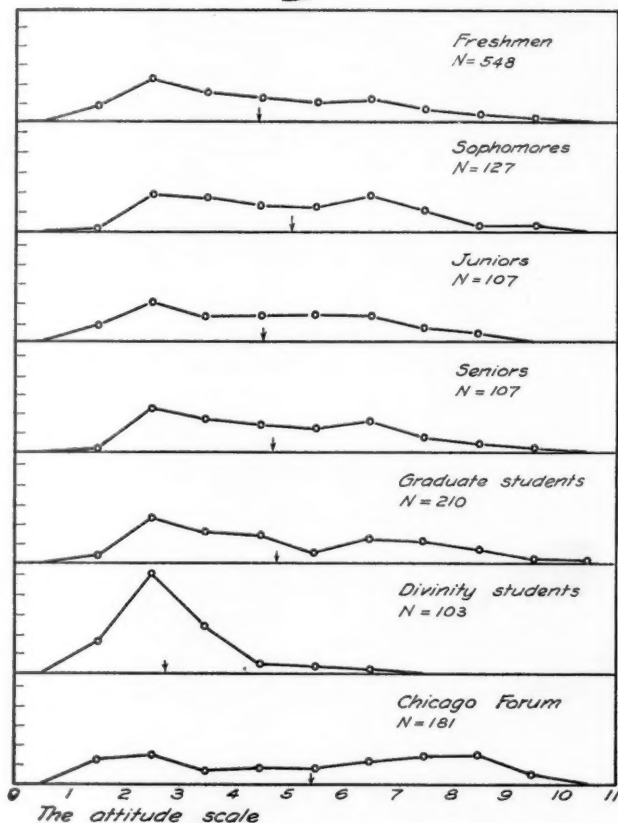
It is expected that a number of scales

of this type will be developed to measure various attitudes that are significant in religious educators. By the use of a battery of such tests a cross section of the religious attitudes of any group of people could be obtained that would be of very great value in planning programs of work. The effect of different courses, different techniques, and different personalities might be more accurately measured by this objective method than by the prejudiced estimates of personal judgments.

The following list of statements given

in random order constitute the experimental scale developed in this experiment and used to verify the method of this type of measurement. Another revised scale will soon be ready for distribution on attitude toward the church. It is hoped that others will experiment with this and develop other instruments as rapidly as possible. The time required and the expense for statistical work are both considerable, but the need for such forms of measurement is imperative for the progress of religious education.

III



AN EXPERIMENTAL STUDY OF ATTITUDES
TOWARD THE CHURCH

Check every statement below that expresses your sentiment toward the church. Interpret the statements in accordance with your own experience with churches. If you do not agree completely with a statement leave it unchecked.

1. I think the teaching of the church is altogether too superficial to have much social significance.
2. I feel the church services give me inspiration and help to live up to my best during the following week.
3. I think the church keeps business and politics up to a higher standard than they would otherwise tend to maintain.
4. I find the services of the church both restful and inspiring.
5. When I go to church I enjoy a fine ritual service with good music.
6. I believe in what the church teaches but with mental reservations.
7. I do not receive any benefit from attending church services but I think it helps some people.
8. I believe in religion but I seldom go to church.
9. I am careless about religion and church relationships but I would not like to see my attitude become general.
10. I regard the church as a static, crystallized institution and as such it is unwholesome and detrimental to society and the individual.
11. I believe church membership is almost essential to living life at its best.
12. I do not understand the dogmas or creeds of the church but I find that the church helps me to be more honest and creditable.
13. The paternal and benevolent attitude of the church is quite distasteful to me.
14. I feel that church attendance is a fair index of the nation's morality.
15. Sometimes I feel that the church and religion are necessary and sometimes I doubt it.
16. I believe the church is fundamentally sound but some of its adherents have given it a bad name.
17. I think the church is a parasite on society.
18. I feel the need for religion but do not find what I want in any one church.
19. I think too much money is being spent on the church for the benefit that is being derived.
20. I believe in the church and its teachings because I have been accustomed to them since I was a child.
21. I think the church is hundreds of years behind the times and cannot make a dent on modern life.

22. I believe the church has grown up with the primary purpose of perpetuating the spirit and teachings of Jesus and deserves loyal support.

23. I feel the church perpetuates the values which man puts highest in his philosophy of life.

24. I feel I can worship God better out of doors than in the church and I get more inspiration there.

25. My experience is that the church is hopelessly out of date.

26. I feel the church is petty, always quarreling over matters that have no interest or importance.

27. I do not believe in any brand of religion or in any particular church but I have never given the subject serious thought.

28. I respect any church member's beliefs but I think it is all "bunk."

29. I enjoy my church because there is a spirit of friendliness there.

30. I think the country would be better off if the churches were closed and the ministers set to some useful work.

31. I believe the church is the greatest institution in America today.

32. I believe in sincerity and goodness without any church ceremonies.

33. I believe the church is the greatest influence for good government and right living.

34. I think the organized church is an enemy of science and truth.

35. I believe the church is losing ground as education advances.

36. The churches may be doing good and useful work but they do not interest me.

37. I think the church is a hindrance to religion for it still depends upon magic, superstition, and myth.

38. The church is needed to develop religion, which has always been concerned with man's deepest feelings and greatest values.

39. I believe the churches are too much divided by factions and denominations to be a strong force for righteousness.

40. The church represents shallowness, hypocrisy, and prejudice.

41. I think the church seeks to impose a lot of worn-out dogmas and medieval superstitions.

42. I think the church allows denominational differences to appear larger than true religion.

43. I like the ceremonies of my church but do not miss them much when I stay away.

44. I believe the church is a powerful agency for promoting both individual and social righteousness.

45. I like to go to church for I get something worth while to think about and it keeps my mind filled with right thoughts.

IV

THE STUDY OF MENTAL DISORDERS AS A BASIS FOR A PROGRAM OF MORAL AND RELIGIOUS RE-EDUCATION

REPORT OF REV. A. T. BOISEN*

THE project upon which I have been asked to report is an attempt to discover through the study of the disorders of the personality the spiritual forces operative not merely in the disordered conditions but in the normal life of man, and to determine the laws which govern them. We are, in other words, seeking as part of our task in the study of the mentally ill to obtain new insight into the objectives and the methods of religious education.

We start with two presuppositions:

1. In mental disorders we are dealing for the most part with maladies of emotion and volition, of attitude and belief, of that which concerns the organization of the personality. Organic pathology is demonstrable in only about 40 percent of the new admissions, while intelligence of the sort that the intelligence tests can measure is often not affected even in grave mental disorder.

2. The study of the pathological is one of the best approaches to the understanding of the normal. Such has been the experience of the medical profession. They have discovered that disease introduces no new processes into the body but merely destroys the balance and thus permits us to observe in exaggerated form processes which are present in health. Because of the difficulty of bringing under laboratory conditions the great driving forces of love and hate and fear and anger the psychologist will do well to profit by the experience of the medical man and make use of the material of which our hospitals are full, material which is the product of just the forces with which in his laboratory he dares not tamper.

Our own attempt falls into two somewhat different divisions:

1. The careful observation of the behavior, the ideas, the attitudes of selected patients and the effort by means of carefully worked out case histories obtained from the patients and from their friends to reconstruct the factors which have determined the behavior which we see.

2. Experimental work in the treatment of specific cases.

Both aspects of the problem have been proceeding steadily. It is obvious that the latter must proceed more slowly than the former. Intensive treatment is a more laborious and time consuming task than the mere collecting of information. Psychotherapy, moreover, does not lend itself readily to experimental work. One may extract teeth or remove tonsils and be reasonably sure of determining the effect upon such diseases as arthritis. One may administer inoculations and determine the effect upon such scourges as typhoid or smallpox. But in psychotherapy no therapeutic measures register except through the medium of the personalities of physician and patient. Psychotherapy, according to Dr. Macfie Campbell, is the physician listening to and talking with the patient about the patient's personal difficulties. It is not a science but an art, a delicate and difficult art, which is little subject to scientific measurement.

Because of the difficulty of measuring the results of our therapeutic experiments I shall content myself with giving the results of a series of studies of the religious factors in 45 cases of psychogenic mental disorder.*

Of these cases, 20 were selected not by myself but by the physicians in charge

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*. Part of the data which follow were presented in *Religious Education* last month.

of an important research project into the nature of those disorders which we label "dementia praecox." In accordance with the principles agreed upon these cases were all of persons of less than 40 years of age and all without obvious physical ailments. These cases were studied from every possible angle, from that of the physiologist and endocrinologist, of the psychiatrist, of the social worker and of the psychologist and intelligence tester. It was my task to take account of the religious factors. What I give are merely my own findings.

The other 25 cases were of persons with whom I had done intensive work myself. Of these 5 were more than 40 years of age, the oldest being 56. Four of these cases were labelled "manic-depressive, manic phase," two "manic-depressive depressed phase" and two "paranoid condition." The rest were "dementia praecox." They are therefore selected cases but they were selected out of a considerably larger group which I have studied because they seemed representative of the profounder psychogenic disorders, not because they were of especial interest to the student of religion.

In all cases included in this study there were found clear maladjustments pertaining to those things by which men judge themselves. Out of the 45 cases sex maladjustments were clear in 37, vocational maladjustments in 11, and social maladjustments were primary in 5 and at least secondary in many others. Of the majority of the cases it may be said that the primary evil seems to be a growing ascendancy of malignant tendencies chiefly in the nature of sex impulses unacceptable to the individual. Of all it may be said that the primary evil is a difficult life situation involving for the individual personal failure as judged by those standards which he has accepted as his own.

If now we group the cases according to the major reaction patterns by which

such difficult life situations may be met we find some significant differences.

In the cases under consideration we may distinguish three chief reaction patterns, surrender, concealment, and awareness of danger with resulting emotional disturbance. In the first type the patient permits the malignant tendencies to take possession and makes little or no resistance. He throws up the sponge and drifts off into a land of day dreams and easy satisfactions. In the second he puts up a stiff front and refuses to admit defeat or error. Such persons, as a rule, resort to delusional misinterpretation. They are being hypnotized, misunderstood, mistreated; they are physically ill and therefore not responsible. Or they may persuade themselves that they are really very important persons, inventors, reformers, writers, detectives. They may take refuge in activity and self assertion and seek as it were to live out a day dream.

Of those who become aware of the situation and attempt to face it we have four groups. There are seven cases in which the malignant tendencies have already got the upper hand before they wake up. These become disturbed, put up for a time a fight and then lapse back into hopelessness and dissolution. A second group of four cases, after a severe struggle, succeed by means of delusional misinterpretation in effecting a reorganization and thus maintaining some degree of integrity. A third group of seven, aroused to their peril, become acutely disturbed and then recover. Six others in a similar situation become seriously depressed. Of these five have recovered.

Placing together those cases characterized by the reaction patterns of surrender and those of concealment, and comparing this group with the 24 cases who become aware of their danger, we make the following discoveries:

In the first group 3 cases out of 21 show religious concern and four make

recoveries. These four are in the manic-depressive, manic group, and the recoveries are probably merely remissions which will be followed by other disturbances.

In the second group all 24 cases show religious concern. This concern is marked during the period of conflict and tends to disappear with the passing of the danger or the giving up of the struggle. Of the 24 cases 12 make recoveries. Some of these will probably stay well.

In other words, we find that religious concern and religious ideas and attitudes are found wherever men are attempting to face those issues which are to them abiding and universal and are aware of unattained or unattainable possibility. Religious ideas and attitudes tend not to appear in cases where the individual has ceased to struggle, or in which he is attempting to conceal the situation.

No little interest attaches to the content of thought found in these two groups, but these ideas are significant from the standpoint of the psychology of mysticism rather than of religious education. I shall not, therefore, on this occasion attempt to discuss this.

In conclusion, let me suggest a few principles which seem to follow from our findings which are important for the religious educator.

1. Conflicts and emotional disturbances are not necessarily evils. They are analogous to fever or inflammation in the physical organism and are to be regarded as attempts to remove those evils which impair one's status and one's growth. The more acute the conflict the better generally are the chances of recovery in the cases which come to the hospital. The real evil is the short-circuiting through easy satisfactions of the great vital urges, of which the sex urge is chief. The worst of all maladies are those in which the sufferer puts up no fight or refuses to face the situation.

2. Religious ideas and religious concern tend to appear where men are fac-

ing the facts and seeking to become better. The religious man, like Professor Dewey's good man, is the man who, no matter how morally unworthy he *has* been, is moving to become better. Not the attainment of any static outcome or result is the significant thing but the process of growth, of improvement, and of progress.* Inasmuch as conflict and struggle are frequently conducive to abnormal or pathological manifestations, we need not be surprised to find that the mystical and the pathological are frequently associated.

3. Psychotherapy is a matter of personal relationship and has to do with the sense of isolation and estrangement which is connoted by the term "sense of guilt." The task of the religious worker in any therapeutic work which he may undertake involves two equally important steps. First, he must implant or reinforce the high social ideal or standard. Second, he must set the individual free from his fears, free from the sense of isolation or estrangement, free from the tyranny of the standardized, and identify him with the group of those who are moving to become better.

4. In spite of all that religious education can do to secure the steady and unbroken development of character, there will always be large numbers who grow up with unresolved conflicts. There will therefore always be need for helping people to face their personal problems and to do so before the malignant tendencies reach advanced stages. There will, in other words, always be need for evangelism. This task, however, should not be left to the traditional message and to the insight of individual evangelists, but should be controlled by those who have been trained to understand and deal with the maladies of personality. To such persons those who have been awakened out of their carelessness and complacency should be brought for counsel and guidance.

*Dewey, *Reconstruction in Philosophy*, page 176.

Of men thus trained there is at present a great shortage. For this reason we are at the Worcester State Hospital offering to a limited number of theological students an opportunity to ob-

tain clinical experience in dealing with the maladies of the personality, in the hope that we may be able thus to supplement theological training in what seems to be a very essential department.

V

THE CHURCH IN THE CHANGING COMMUNITY

REPORT OF PROFESSOR SAMUEL C. KINCHELOE*

A BRIEF STATEMENT OF THE PROJECT

This is a study of the reactions of the white American Protestant church to a type of city area, namely, that often described as a changing or deteriorating community. The entire city is changing and mobile, but there are certain areas where the changes are more acute than they are in the city as a whole. These may be due to the movement of races and cultural groups, the incoming of business or manufacture, the shifting from single homes to rooming houses or apartments, and, in general, to the high degree of mobility in urban communities.

This project studies the adaptations which the Protestant church makes to the more acute changes, and the effect of these adaptations on the institution and the religious experience of its members. We are seeking to describe in terms of the operating factors the social processes which go on in churches as the community changes from one in which the white American Protestant church can live and thrive to one in which it either no longer exists or makes adaptations so radical that it is not the same kind of institution. This project has been formulated with the idea of getting at the behavior sequence of these institutions over a period of years in communities with different degrees of disintegration.

The study is being made in Chicago where there are communities in all stages of change through which a community may go. Moreover, the Protestant

church has been established long enough in Chicago to make definite reactions to these different types of communities.

This is a study of the relationship of the church to the community and to community changes. The church is one of the first institutions to enter the community and one of the last to leave, and not infrequently identifies itself with the parish, a geographical area. The church as a cultural institution with traditions, moral tenets, social values, and groups, bound together in intimate relations, not only reflects the life of the community but, with the other institutions of the community, constitutes community life. The disintegration and disorganization of churches is related to the movements which create the disorganization of the community at large.

PROCEDURE

We proceeded by

a. The study of the distribution of institutions and of membership by means of spot maps.

b. The graphing of the membership of individual churches and of all the churches of areas by years.

c. The surveying of all the churches of an area in order to secure a classification of the churches of the area on the basis of their reaction to the changing community.

d. The working out of indices of the different typical reactions which churches are making in these areas.

e. The beginning of long-time intensive case studies of selected institutions. The effort is made to secure a descrip-

*Professor in the Y. M. C. A. College, Chicago.

tion of the processes of adaptation which go on in these institutions.

THE USE OF THE SPOT MAP

By the use of the spot map, we have been able to

1. Delimit areas for study.
2. Indicate the extent of problems.
3. See the characteristic distribution of the Protestant, the Catholic, and the Jewish churches in the large city.
4. See how the churches of different national and racial groups are distributed along the general lines of racial and cultural movements of the city, or are found clustered in communities.
5. Indicate the relation in time between dying and moving churches and the movements of racial and cultural groups.
6. Indicate in what national and racial groups there are the greatest number of Protestant churches.
7. Indicate the national, racial, and

cultural groups which completely "take" an area.

8. Indicate in what area and groups institutional churches and neighborhood houses have grown up.

9. Indicate not only the significance of artificial barriers, such as railroads, boulevards, car lines, parks, etc., for the distribution of church members, but also the fact that there are racial and cultural areas which act as barriers.

10. Indicate the movements of churches as they have sought to find an area in which they can live.

11. See a relationship between the reactions which churches make to their areas and the configuration which their membership makes when spotted upon a map.

12. See the relation between the different typical reactions which churches in Chicago are making and the areas of the city.

VI

EVALUATING OLD TESTAMENT NARRATIVES FOR CHILDREN

REPORT OF MR. GEORGE W. BEISWANGER*

WHAT portions of the Old Testament narrative belong in a list of the choice literatures for children? A project just started in the workshop of the Institute of Character Research is attempting to answer this question. Its purpose is to select in their most excellent form those Old Testament stories which possess intrinsic worth for moral and spiritual growth.

The methods to be used are those by which a similar selection of the choice literature in the field of the fairy tale, myth, and legend has already been made. A full description of these methods appeared in a recent issue of *Religious Education*.¹ Briefly, all stories are ranked

according to certain standards of literary worth. These standards are broadly conceived to include such points as stylistic excellence, warmth and color of treatment, educational effectiveness, interest value, truthfulness to fact and law, artistry of appeal to the higher impulses, and value as integrators of personality around social and spiritual ends.

Each story is also given a preferred grade indicating the school age at which it is best adapted to the child. In addition, the import of the story for character, that is, its likely effect upon the moral life of the child, is indicated by stating the concrete life situation to which the story applies and the particular responses which it might encourage in these situations.

These several judgments are made by a staff of trained critics who work in-

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1. Shuttleworth, Frank K., "Statistical Studies in the Judging of the Worth of Children's Character Training Literatures," *Religious Education*, June, 1927.

dependently of each other. The individual ratings are averaged, and submitted to careful editorial revision. At every step statistical procedures are used to ascertain the trustworthiness of the judgments.

The project as defined extends beyond biblical materials themselves to include re-tellings, adaptations, or even free reconstructions of Bible stories, such as are "literary" in nature. That is, all treatments of Old Testament narrative are to be considered which might be read and enjoyed by the child in some period of recreational reading.

The data on the choicer books and stories are to be gathered into the appropriate volumes of the *Guide to Literature for Character Training*, the first of which has just been published.²

In such a study, which relies upon subjective judgments for its basic data, the problem of validation, usually neglected, is of considerable importance. Here resort must be had to the opinions of other individuals who are competent to judge in this field. These will include experts in moral and religious education, professional groups such as ministers and trained teachers of the Bible, and other persons with intelligent and cultivated tastes in the realms of English, education, and religion. The program of validation plans to ask the assistance of these persons in the following ways:

1. The rank of literary excellence assigned to the several stories will be tested by asking groups of outside judges to arrange typical sets of stories in order of merit. That is, these groups will be asked to do the same job of literary discrimination that the staff readers have already done.

2. The grade placement of the stories will be disciplined against expert opinion as to the most suitable grade-year for giving particular Bible stories to children.

² Edwin D. Starbuck, Frank K. Shuttleworth and others, *A Guide to Literature for Character Training: Volume I—Fairy Tale, Myth and Legend*.

3. The staff judgments as to the character content and worth of the Old Testament stories will be checked in a number of ways, the most important of which involves a critique of the usual pedagogical uses to which these stories are put. Groups of expert judges will be asked to examine a list of the moral truths supposedly taught by a particular story, according to various Bible courses, textbooks and lessons, and to differentiate the ones clearly taught by the story, those taught only obscurely or not at all, and those directly contradicted by actual implications of the story. In addition, the comparative worth of biblical and secular stories for character training will be tried out on expert groups by the method of paired judgments.

4. Where possible, the comparative interest value for children of the Bible stories one with another and with stories from more secular sources will be tested. A technique is ready by which this can be done with considerable reliability.

These and other fragmentary bits of experimentation, it is hoped, will piece together into a general picture of the validity of the staff judgments. At bottom they cannot help being influenced by individual slants and biases. It is important to know to what extent the controls placed around them and the painstaking discipline under which they are made overcome these factors and bring into this difficult field an objectivity of judgment never obtained heretofore.

In conclusion, the "secular" approach of the project to the Bible stories is worth emphasizing. It is interested in them as such, apart from all paraphernalia of pedagogy, of whatever sort it may be. By judging the stories as literature for free reading, it becomes possible to look at their essential values, free from encrustation, and apart from any worth smuggled in by treatments which use the story for didactic purposes.

This method of attack seems to be get-

ting at the central problem, the actual ethical stuff in the biblical literature. If it proves workable it may become possible to weigh the amount of energy wastefully spent in helping Bible stories to shoulder ethical and religious meanings they were never meant to carry, and to discover in less exploited portions an unsuspected wealth of material for moral instruction.

It is perhaps fortunate, too, that the standards by which the stories are to be judged have already been worked out apart from the Bible, and that the scale

of literary excellence, the details of grade placement and the terminology of ethical classification will in the main be identical with those used throughout the volumes of the *Guide*. On this basis, Bible stories and secular stories with identical rank, grade, and situations will be strictly comparable. If the program of religious and moral tuition has been too exclusively biblical, the fact will be made plain. At the same time, those other sources of character training literature will be pointed out from which the present curriculum may be enriched.

RESEARCH PROJECTS IN RELIGIOUS EDUCATION*

THE result of a rather thorough effort to discover what research is now in process in religious education and experiences, character education, and church surveys is the following list of 148 projects. Several points may be raised for consideration

Almost two-thirds of the projects are theses. Some of the schools with the longest lists of student theses have not one entry for a faculty member. On the other hand, much of the research which is above the rank of theses is being carried on either in special institutions for research or under special funds granted to universities for a specified length of time, and making possible the employment of full time research workers. This situation seems to indicate a growing separation between teaching and research and raises the question whether students are being trained in research by men whose teaching duties preclude their carrying on much, if any, research themselves. To the extent that this is true, what will be the result? Are teachers able to keep themselves informed of the latest developments in research when they do little of it themselves? Ought not

students receive increased contact with the special research institutions during their period of preparation? Where the research under special grants is carried on in universities, this contact of student and mature research worker is possible. But this situation exists in at most only a few institutions.

Since the research projects are so largely student theses it is to be expected that research would be limited to the universities with outstanding graduate departments of religious education.

The projects indicate the great interest in curriculum construction and materials and an effort to make these effective in actual living and to test the results. There is also marked interest in the construction and use of tests to discover various traits and attitudes and correlate them with other factors.

With a very few exceptions the projects reported are uncompleted ones. Reports received for a few projects recently completed but not published were included, since the purpose of the list is to indicate the type and extent of work and make it possible for those with like interests to communicate with each other and cooperate.

The list is no doubt far from complete. Those to whom questionnaires were sent

*Compiled by Ruth Shonle Cavan for the Research Committee of the Religious Education Association. The Committee feels indebted to a number of people who secured reports from colleagues and students.

in several institutions did not make complete response. The list is offered, however, as the best which could be compiled under the rather unsatisfactory conditions of requesting information by questionnaire and depending upon a few people in each institution to collect perhaps several dozen reports from their colleagues and students. Blanks were sent to the following groups: seminaries and departments of religious education known to carry on research; research organizations, such as the Institute of Social and Religious Research, the Character Education Inquiry, etc.; child study clinics; fellows of the National Council on Religion in Higher Education; members of the National Council for Jewish Education; a long list of miscellaneous names. The child study clinics gave few responses, although several reported that they did no work in this field. Obviously, they do much work and research in character formation, but they evidently do not classify it under the heading of character education, which was one of the terms used on the blanks.

BOY SCOUTS OF AMERICA

Goodman, E. Urner, 37 S. Wabash Avenue, Chicago, chairman of a committee of twelve Scout executives. *Problem*: a study of character values of scouting, made by testing the effectiveness for character development of the various activities used in scouting, e. g., camping, hiking. *Date*: 1928. *Finances*: national headquarters. *Methods*: questionnaires; laboratory experiments.

BUCKNELL UNIVERSITY

Bond, Charles M., Bucknell University, Lewisburg, Pa. *Problem*: what techniques can be used to the best advantage for character development through the experience curriculum in college? Ph. D. thesis at University of Chicago. *Dates*: 1925-28.

UNIVERSITY OF BUFFALO

Carpenter, Niles, University of Buffalo; *Gwendolyn Doughton*, assistant.

Problem: the role of religion in the disassociated family, a study of cases of disorganized families, in which one or another member has definite religious interests. *Method*: case studies.

CATHOLIC UNIVERSITY OF AMERICA

Furfey, Paul Hanly, Catholic University of America. *Problem*: measurement of the growth of personality or "developmental age" in boys. *Dates*: 1925-28. *Methods*: objective paper and pencil test, rating scale, intelligence tests, physical measurements.

Furfey, Paul Hanly, Catholic University of America; *Martha Bonham* and *Mae Sargent*, assistants. *Problem*: relative influence of heredity and early environment on personality. *Dates*: 1927-28. *Method*: graphic rating scale used with babies in maternity hospital and later in their homes to determine whether personality types noted at birth are persistent or soon modified.

McDonough, Sister M. Rosa, Catholic Sisters College, Brookland, D. C. *Problem*: study to discover unit character traits (if there are such) and their relationships. Ph. D. thesis. *Dates*: 1926-29. *Method*: statistical.

CHICAGO THEOLOGICAL SEMINARY

Boisen, Anton T., Chicago Theological Seminary. *Problem*: what part, if any, does religion play in various mental disorders? *Dates*: 1926-. *Method*: case records.

Gross, Dorothy, 909 E. 46th St., Chicago. *Problem*: trends and motives in religious drama in the United States in the twentieth century. Thesis. *Dates*: 1928. *Methods*: interviews, study of published plays, articles, institutions.

Holt, A. E., and *Hutchinson, Carl*, Chicago Theological Seminary, and *Landis, Benson Y.*, Federal Council of Churches, N. Y. C. *Problem*: a study of the farmers' attitude toward the church in the dairy district near Chicago, to discover what part religion plays in the conflict between the dairy district and

Chicago. *Dates:* 1927-28. *Finances:* Chicago Theological Seminary and Federal Council of Churches. *Methods:* personal interviews, case records, Thurstone's attitude scale, study of available records, of farmers' and church organizations.¹

Holt, A. E., Chicago Theological Seminary, and Kincheloe, S. C., Y. M. C. A. College, Chicago. *Problem:* a study of urban religion to give an understanding of religious conditions and to help direct activities of the Congregational Church in Chicago. *Dates:* 1927-. *Finances:* Chicago City Missionary and Extension Society. *Method:* investigation by field staff.²

Holt, A. E., Chicago Theological Seminary, Paul Douglas, University of Chicago, Heinrich Maurer, Lewis Institute, and William Pauck. *Problem:* a study of the interaction between religious ethics and economic development in America. *Dates:* 1926-32. *Method:* research in documentary records.³

UNIVERSITY OF CHICAGO

Blakeway, Herbert N., 5757 University Avenue, Chicago. *Problem:* religious education between Sundays. B. D. thesis. *Dates:* 1925-28. *Methods:* questionnaires, analysis of manuals, personal visits, and interviews.

Burris, Clinton E., 6047 Ellis Avenue, Chicago. *Problem:* survey of religious education of Baptist churches in the Chicago area. M. A. thesis. *Dates:* 1927-28. *Method:* survey schedule.

Kingdon, Robert W., 5401 Ellis Ave., Chicago. *Problem:* the personal traits and social conditions which made John Wesley a great religious leader. M. A. thesis. *Dates:* 1926-28. *Method:* study of literature by and on Wesley, and of psychology.

Lange, Eleanor, 5845 Drexel Ave.,

Chicago. *Problem:* experiments in the "experience-centered" curriculum. M. A. thesis. *Dates:* 1927-28.

Lester, Anna Dorothy, Green Hall, University of Chicago. *Problem:* the worship experiences of young people in the church service. M. A. thesis. *Dates:* 1928. *Methods:* questionnaires, planning of services.

Lumsden, Harold A., 1365 E. 60th St., Chicago. *Problem:* reactions of adults in worship. M. A. thesis. *Dates:* 1928. *Methods:* questionnaires, visits, interviews.

McCallum, James H., 5800 Maryland Ave., Chicago. *Problem:* evaluation, in the light of present day trends in religious education, of the curricula used by Protestant churches in preparation for church membership. M. A. thesis. *Dates:* 1927-28.

Richter, George M., Lindenwood, Ill. *Problem:* analysis of the groups which participated in the development of the educational program of the missionary societies in Sierra Leone, West Africa. M. A. thesis. *Dates:* 1927-28. *Methods:* historical records, government records, personal observation.

Shah, L. K., 42 Gates Hall, University of Chicago. *Problem:* the creative aspects of Indian nationalism and its bearing on Indian education. Ph. D. thesis. *Dates:* 1926-28. *Methods:* literature, reports, questionnaire.

Sites, Emri, 123 Goodspeed Hall, University of Chicago. *Problem:* the difficulties met by directors and leaders of week-day schools. M. A. thesis. *Dates:* 1927-28. *Method:* questionnaires and personal observation.

Spence, H. E., 5520 Ellis Ave., Chicago. *Problem:* the characteristics, needs, interests, etc. of middle aged men, to determine the best way in which they can be assisted in meeting their needs. Ph. D. thesis. *Dates:* 1927-28. *Method:* modified case study.

Sutherland, Robert L., 5514 Blackstone

1. Joint study with Federal Council of Churches.

2. Joint study with Chicago City Missionary and Extension Society.

3. Joint study with the Department of Political Economy of the University of Chicago.

Ave., Chicago. *Problem:* What factors operate toward a social adjustment of juvenile delinquents in Chicago? Ph. D. thesis. *Dates:* 1928-30. *Finances:* National Council on Religion in Higher Education.

Thurstone, L. L., Chave, E. J., and Brown, Clarence R., University of Chicago. *Problem:* a scale for measuring attitudes toward the church. *Dates:* 1927-28. *Finances:* University of Chicago. *Methods:* experiments and statistics.

Westphal, E. P., 338 Peters Trust Bldg., Omaha, Nebr. *Problem:* what is the plan and function of worship in the development of religious attitudes? Ph. D. thesis. *Dates:* 1923-. *Methods:* interest analysis, activity analysis, observation.

COLUMBIA UNIVERSITY, TEACHERS
COLLEGE

Burdick, Edith M., 162 W. 94th St., N. Y. C. *Problem:* to devise a group test for children which will by indirect methods reveal the culture and the economic status of their homes. Ph. D. thesis. *Dates:* 1925-28. *Finances:* Character Education Inquiry. *Method:* testing and case histories.

Drake, Charles A., 500 Washington Ave., Brooklyn. *Problem:* to measure the effect of interests and emotionality on academic success. Ph. D. thesis. *Dates:* 1925-28. *Finances:* personal and Adelphi College. *Method:* statistical, tests.

Fineberg, Solomon. *Problem:* the educational factors that determine Jewish-mindedness. Ph. D. thesis.

French, John S., Boys Club, Ave. A and 10th St., N. Y. C. *Problem:* ways and means of bringing an individual's emotions into the focus of his own attention for alteration and control. Ph. D. thesis. *Dates:* 1926-28. *Method:* philosophical.

Hartshorne, Hugh, Columbia University, and May, Mark A., Yale Univer-

sity. *Problem:* work of the Character Education Inquiry: 1. A few tools for scientific research in this field; 2. Demonstration of possibilities of research to (a) evaluate current methods, (b) guide experimentation, (c) uncover causes of character tendencies, (d) throw light on the nature of character. *Dates:* 1924-29. *Finances:* Institute of Social and Religious Research. *Method:* statistical.

Hsia, J. C., Furnald Hall, Columbia University. *Problem:* to ascertain what constitutes sociability of school children, particularly the usefulness of certain tests and factual data in prediction. Ph. D. thesis. *Dates:* 1926-28. *Methods:* statistical treatment of tests and questionnaires.

Hunter, Earle L., 69 Tieman Place, N. Y. C. *Problem:* to discover and classify attitudes included in patriotic behavior. Ph. D. thesis. *Dates:* 1927-29. *Method:* analysis.

MacLean, Angus. *Problem:* children's ideas of God. Ph. D. thesis.

Maller, J., 180 Claremont Ave., N. Y. C. *Problem:* an analysis and measure of cooperativeness of children in grades V-VIII. Ph. D. thesis. *Dates:* 1926-28. *Finances:* Character Education Inquiry. *Methods:* tests of cooperativeness measuring speed and accuracy of work for class.

Maller, J., 180 Claremont Ave., N. Y. C. *Problem:* does attendance in a Hebrew day school have any effect upon honest behavior? *Dates:* 1926-28. *Method:* correlation between scores for deception tests and length of attendance in Hebrew school.

Richards, Katherine. *Problem:* educational values in the observance of Christmas in Protestant church schools. Ph. D. thesis. *Methods:* study of historical place of Christmas, of present materials used at Christmas time, correspondence and observation.

Watson, Goodwin B., Columbia University. *Problem:* measurement of some

significant attitudes of teachers. *Dates:* 1926-28. *Methods:* test, controlled interviews, statistical summary.

CORNELL UNIVERSITY

Moran, Hugh A., 221 Endy St., Ithaca. *Problem:* a study of the biographies of 63 Americans in the Hall of Fame, to determine the dominant motives and major factors in the development of character. Ph. D. thesis at Union Theological Seminary. *Dates:* 1925-29. *Finances:* National Council of Religion in Higher Education. *Methods:* study of biographies with listing and comparison of stated factors.

DEPAUW UNIVERSITY

Bartlett, Edward R., DePauw University. *Problem:* determination of curriculum objectives based upon life situations among rural school children; study of ideals presented in textbooks in rural schools. The object is to secure data from which to develop a rural religious education curriculum. *Dates:* 1928-. *Methods:* questionnaires, tests, observation.

Bartlett, Edward R., DePauw University. *Problem:* relative honesty of rural and urban children to determine whether the different experiences of these groups result in different ethical standards. *Dates:* 1927-28. *Methods:* Character Education Inquiry tests.

FEDERAL COUNCIL OF CHURCHES⁴

Beffel, John N., and *Kirchwey, George W.*, New York School of Social Work. *Problem:* a study of prison labor, with particular reference to contract labor, in penal institutions in the United States, to discover the results of various existing methods of employment of labor in prisons. *Dates:* 1925-28. *Finances:* Federal Council. *Methods:* questionnaires to state officials, analysis of official reports, etc.

Johnson, F. E., *Myers, James*, *Suffern, Arthur E.*, Federal Council of Churches.

⁴ See Chicago Theological Seminary for joint study.

Problem: the industrial situation in Colorado due to strife in the coal fields, a study to aid the churches, which requested the inquiry, to determine their position, and to inform the public. *Dates:* 1928. *Finances:* Federal Council. *Methods:* interviews and conferences; use of available statistics.

Johnson, F. E., *Myers, James*, *Suffern, Arthur E.*, Federal Council of Churches. *Problem:* to discover the comparative conditions of industrial relations in the Real Silk Hosiery Mills, Inc., under an employee representation plan, and between the employers and the American Federation of Full Fashioned Hosiery Workers under a system of collective bargaining. *Dates:* 1927-28. *Finances:* Federal Council. *Methods:* interviews, and examination of documentary evidence.

Johnson, F. E., and *Suffern, Arthur E.*, Federal Council of Churches. *Problem:* to analyze the factors which brought about the bituminous coal strike in Western Pennsylvania, to describe present conditions, and point out the economic, political, and social consequences. *Dates:* 1928. *Finances:* special contributions. *Methods:* interviews, examination of documentary evidence, and analysis of statistical data.

Johnson, F. E. and *Suffern, Arthur E.*, Federal Council of Churches. *Problem:* to discover what policies the various church bodies are following with reference to the employment of labor, both industrial and clerical. *Dates:* 1927-29. *Finances:* Federal Council. *Methods:* questionnaire, interviews, plant inspection.

HARTFORD SCHOOL OF RELIGIOUS EDUCATION

Armstrong, Harley. *Problem:* Jesus' use of materials. M. A. thesis. *Method:* literary research.

Band, Gertrude Elizabeth. *Problem:* Paul's use of the Old Testament in Corinthians. M. A. thesis.

Betts, Henry Lewis. *Problem:* The Sunday school and young men. M. R. E. thesis.

Bradley, Edna I., 110 Sherman St., Hartford, Conn. *Problem:* a study of the work that is being done among children from one to five years of age in religious education. Thesis. *Dates:* 1927-28.

Deeter, John W. *Problem:* war time emotion and motive. M. A. thesis.

Dressler, Arthur Joseph. *Problem:* the significance of the Lord's day in religious education. Ph. D. thesis. *Method:* historical and scientific research.

Fletcher, Orville Theodore, 102 Princeton St., Springfield, Mass. *Problem:* to discover methods and material used in adult religious education. Ph. D. thesis. *Dates:* 1927-28. *Methods:* writings on subject reviewed; personal inquiries and observations.

Fulton, Mary Vaughan. *Problem:* dependency in children and its treatment. M. A. thesis.

King, Lester F., 99 Sherman St., Hartford, Conn. *Problem:* a history of religious education among Disciples of Christ in America. M. R. E. thesis. *Dates:* 1927-29. *Method:* historical.

Klingelhofer, Onita Julia. *Problem:* educational values in the teaching of Jesus for high school girls. M. A. thesis.

Ledbetter, Florence Elliott. *Problem:* relation of case work to religious education. M. A. thesis.

Lilley, Ernest Arthur. *Problem:* the religious emotion. M. R. E. thesis.

Makhitarian, Socrates Makhitar. *Problem:* the religious educators of the Armenian Church, 325-451 A. D. M. A. thesis.

Malcolm, William Wallace. *Problem:* personality in religious education—an inquiry into the end and method of religious education. Ph. D. thesis.

McGuffie, Elizabeth. *Problem:* a vacation school program for a foreign community in rural New England. M. A. thesis. *Dates:* 1927-28. *Finances:* local

church. *Methods:* survey, experiments.

Moir, John Alexander. *Problem:* the place of the minister in religious education in the local church. M. R. E. thesis. *Dates:* 1927-.

Morton, Clement Manly. *Problem:* the principles underlying the development of a program of religious education for Porto Rico. M. R. E. thesis. *Methods:* research in school and on the field.

Osborn, Lois Curtis. *Problem:* a course of study for adolescent girls. M. A. thesis.

Scarborough, Verna Elizabeth. *Problem:* the religious education of first and second year college girls. M. A. thesis.

Teale, Arthur Ernest. *Problem:* the history of religious education in the Methodist and Presbyterian churches in the province of Quebec. Ph. D. thesis. *Method:* historical.

Tucker, Herbert. *Problem:* the sociology of religious education. Ph. D. thesis.

Vaill, Deborah Locke. *Problem:* the use of poetry in the religious education of adolescents. M. A. thesis.

INSTITUTE OF CHILD GUIDANCE, N. Y. C.

Rogers, Carl R., 145 E. 57th St., N. Y. C. *Problem:* to develop tests which will uncover emotional conflicts lying at the root of behavior disorders in children aged nine to twelve. Ph. D. thesis at Columbia University. *Dates:* 1927-28. *Methods:* tests to problem and normal children; diagnosis of problem children by psychiatrists, psychologists, etc.

INSTITUTE OF SOCIAL AND RELIGIOUS RESEARCH

Douglass, H. Paul, Institute of Social and Religious Research, N. Y. C. *Problem:* how to study the city church—a summary of methods developed in previous studies of the Institute. *Dates:* 1926-27. *Finances:* the Institute. *Methods:* analysis and generalizations of methods of previous projects.

Douglass, H. Paul, Institute of Social and Religious Research, N. Y. C. *Prob-*

lem: analysis of religious and social forces of a suburban community (Tarrytown, N. Y.) *Dates:* 1927-28. *Finances:* the Institute. *Methods:* institutional study of church, census and canvas study of religious population, and study of records and literary sources.

Staff of the Institute. Problem: Study of the rural immigrant. *Dates:* 1926-29. *Finances:* the Institute. *Methods:* statistics and field work.

Staff of the Institute. Problem: study of rural home mission aid. *Dates:* 1926-28. *Finances:* the Institute. *Method:* statistical.

INTERNATIONAL COUNCIL OF RELIGIOUS EDUCATION

Vieth, Paul H., and staff of the International Council. Problem: research work relating to special projects in the work of the departments of the Council, particularly to the New International Curriculum of Religious Education. Includes study of individuals and groups, together with possible Christian outcome in situations revealed. *Dates:* 1925-. *Finances:* International Council. *Methods:* analysis and objective procedure.

UNIVERSITY OF IOWA

Clark, Earl. Problem: a comparative study of the religious experience of Negro and white college students. *Dates:* 1928-. *Method:* a self-rating device.

Husband, Ivy C. Problem: a statistical study of the interest value for children of fiction for the seventh and eighth grades. The crucial problem is whether interest value of books can be measured with some reliability under controlled conditions, and the relation of interest value to adult judgments of merit. *Dates:* 1928-29. *Finances:* University of Iowa. *Method:* statistical.

Reusser, John. Problem: a statistical analysis of fine objective methods for measuring the comprehension difficulty of the parables. *Dates:* 1927-28. *Methods:* pencil and paper tests, statistics.

Shuttleworth, Frank K. Problem:

the measurement of the character and environmental factors other than intelligence involved in scholastic success. *Dates:* 1923-26. *Finances:* personal, and Graduate College. *Methods:* pencil and paper tests, statistics.

Shuttleworth, Frank K. Problem: statistical studies in the judging of children's character training literature. The purpose is to determine the validity of the situations, grading, and degrees of merit recommended for books and stories listed in "A Guide to Literature for Character Training, Vol. I." *Dates:* 1925-28. *Finances:* Institute of Character Research. *Methods:* statistical and other methods.

Shuttleworth, Frank K. Problem: the comparative reliability of three methods of measuring interest value of fairy tales for children. *Dates:* 1926-27. *Finances:* Institute of Character Research. *Methods:* statistical.

Shuttleworth, Frank K. Problem: a critique of the grading of the Winnetka Graded Book List. *Dates:* 1926-28. *Finances:* Institute of Character Research. *Method:* statistical.

Shuttleworth, Frank K. Problem: a technique for the validation of questionnaire data. *Dates:* 1927-28. *Method:* statistical.

Starbuck, Edwin D., Shuttleworth, Frank K., Beiswanger, George W., University of Iowa. Problem: to devise and apply techniques for evaluating the Old Testament stories as literature materials for character training. *Dates:* 1927-28. *Finances:* Institute of Social and Religious Research. *Methods:* judgments by staff of trained readers, statistical treatment, validation by judgments of experts.

Stevick, Paul R. Problem: to analyze and discover the psychological factors involved in religious radicalism and conservatism among adults. *Dates:* 1927-29. *Finances:* University of Iowa. *Methods:* laboratory apparatus, pencil and paper tests, statistical analysis.

UNIVERSITY OF MICHIGAN

Angell, R. C., University of Michigan. *Problem*: how well adjusted are university students to life in its various aspects? *Dates*: 1927-28. *Finances*: University of Michigan. *Methods*: tests, life histories, and interviews.

Carr, L. J., University of Michigan, and Landis, Paul H. *Problem*: relation of Ann Arbor churches to community leadership. *Dates*: 1927. *Method*: interviews on basis of definite questions.

Carr, L. J., University of Michigan, and Lovejoy, Philip. *Problem*: expenditures of time and money by churches and church people in Mt. Clemens on religious education, choir, etc., relative to time and money spent on competing activities on Sunday. *Dates*: 1927. *Methods*: study of church records, interviews.

UNIVERSITY OF MINNESOTA

Olson, Willard C., University of Minnesota. *Problem*: to what extent is it possible to predict later overt delinquency on the basis of measures of problem tendencies obtained in the first grade of the public schools? *Dates*: 1925-31. *Methods*: measurement with behavior rating scale, statistical analysis, clinic, school and court records.

Olson, William C., University of Minnesota. *Problem*: neurotic tendencies in children: criteria, incidence, and differential tests. *Dates*: 1926-27. *Finances*: National Research Council. *Methods*: measurement, clinical, statistical treatment.

Sorenson, Herbert, University of Minnesota. *Problem*: adjustment of behavior problems of junior high school pupils. Ph. D. thesis. *Dates*: 1926-28. *Finances*: personal, and Bureau of Research, University of Minnesota. *Methods*: rating scales, statistical treatment, experimentation in pupil adjustment.

UNIVERSITY OF NORTH CAROLINA

Duncan, H. G., University of North Carolina. *Problem*: the reactions of ex-ministers toward the ministry, upon entering, upon leaving, and present partici-

pation in organized church activities. *Dates*: 1925-. *Methods*: questionnaires, life history documents, interviews.

NORTHWESTERN UNIVERSITY

Adams, Edward, 916 Belden Ave., Chicago. *Problem*: the curriculum and method of teaching in a specified number of interdenominational Bible institutes. M. A. thesis. *Dates*: 1927-28. *Methods*: interviews, visits, questionnaires.

Bruns, Freda, 2040 Sherman Ave., Evanston. *Problem*: elimination from Sunday school and its causes. M. A. thesis. *Dates*: 1927-28. *Method*: interviews.

Danner, Ruth, 2040 Sherman Ave., Evanston. *Problem*: a comparative analysis of the norms of conduct found in selected biblical and extra-biblical characters with a view to discovering their potential value for religious curriculum. M. A. thesis. *Dates*: 1927-28. *Methods*: analysis of characters as found in biography.

Davis, Elizabeth Stone, 1808 Sherman Ave., Evanston. *Problem*: a study of biblical allusions in twenty selected hymns. M. A. thesis. *Dates*: 1927-28. *Method*: analysis and classification of literature.

Gumm, Glenn G., 2330 N. Halsted St., Chicago. *Problem*: the contributions of Horace Bushnell to the field of religious education. M. A. thesis. *Dates*: 1927-28.

Heaton, Mrs. E. Allison, 400 Lake St., Oak Park, Ill. *Problem*: the educational theories and methods, the agencies of promotion, and the types of materials used from the early beginnings to the present time in the missionary education program of the Methodist Episcopal Church. M. A. thesis. *Dates*: 1927-28. *Method*: historical.

Hobart, Louise, 623 Garrett Place, Evanston, Ill. *Problem*: the religious trends in China since 1911. M. A. thesis. *Dates*: 1927-28. *Methods*: historical and descriptive.

Jones, Velma, 5865 Lowell Ave., In-

dianapolis, Ind. *Problem*: a descriptive and analytical study of the awards, symbols and ceremonies found in specified national organizations for girls. M. A. thesis. *Dates*: 1927-28. *Methods*: descriptive, analytical.

Nave, J. W., 2218 Maple Ave., Evanston. *Problem*: a study of the Charterhouse Course of Religious Education with reference to its suitability for use in India. M. A. thesis. *Dates*: 1927-28. *Finances*: church board, and personal. *Methods*: analysis of population served, score card evaluation of literature.

Sauder, Jerry, Grabill, Ind. *Problem*: changes of seventeenth century Christian thought due to science. M. A. thesis. *Dates*: 1927-30. *Method*: historical.

Secor, Blanche, 2440 Sherman Ave., Evanston. *Problem*: significant movements in moral education in the public schools of the United States. M. A. thesis. *Dates*: 1927-28. *Finances*: research division of Northwestern University. *Methods*: descriptive and critical.

Sloan, William W., 2330 N. Halsted St., Chicago. *Problem*: a study of the social background of the parables of Jesus with special reference to their use as teaching material. M. A. thesis. *Dates*: 1927-29. *Methods*: analysis of literature and field survey.

Smart, Thomas, 2330 N. Halsted St., Chicago. *Problem*: the historical development and present status of a specified list of Bible schools in the United States, with reference to the function, objectives, and results of these schools. M. A. thesis. *Dates*: 1927-28. *Method*: historical.

Thomas, Virginia, 1928 Sherman Ave., Evanston. *Problem*: the economic and professional standing and the vocational outlook of women professors of religious education. M. A. thesis. *Dates*: 1927-28. *Methods*: questionnaire and statistics.

White, Paul C., 1434 Rascher Ave., Chicago. *Problem*: history of the Sunday school in the Nebraska Synod of the United Lutheran Church in America.

M. A. thesis. *Dates*: 1927-28. *Method*: historical.

Williams, Martha Ruth, 1919 Darington Ave., Evanston. *Problem*: norms of conduct found in the words and works of Jesus. M. A. thesis. *Dates*: 1927-28. *Method*: analysis of Bible and other literary documents.

Wilson, Nellie, 1928 Sherman Ave., Evanston. *Problem*: trends of thought in current religious education as shown in selected text books used in college courses in this field. M. A. thesis. *Dates*: 1927-28. *Methods*: study of literature and classification of trends of thought under selected categories.

UNIVERSITY OF OREGON

Tuttle, H. S., University of Oregon. *Problem*: character value of certain elements of a curriculum of religious education. *Dates*: 1927-30. *Finances*: research fund, University of Oregon. *Methods*: work with control and experimental groups.

REED COLLEGE

Sisson, Edward O., Reed College, and Katherine Niles, student. *Problem*: study of young peoples' societies to get light on methods used and results obtained. *Dates*: 1927-28. *Methods*: survey of literature, visits, interviews.

RELIGIOUS EDUCATION ASSOCIATION

Cavan, Ruth Shonle, Religious Education Association, Chicago. *Problem*: study of the interests and problems of young business women. *Dates*: 1927-28. *Finances*: Religious Education Association. *Methods*: questionnaires, tests, interviews, records of other institutions.⁵

UNIVERSITY OF ROCHESTER

Brown, Francis J., University of Rochester, and Miss Schelmodine. *Problem*: are tests of knowledge of right and wrong a measure of actual conduct in a life situation? *Dates*: 1926-27. *Method*: tests to twenty honor and twenty dishonest pupils.

⁵. Joint study with the Y. W. C. A.

Brown, Francis J., and Henderson, Frank, University of Rochester. *Problem*: survey of objective measurements of character. *Dates*: 1926-27. *Methods*: survey of literature and personal letters.

UNION OF AMERICAN HEBREW CONGREGATIONS

Gamoran, Emanuel, Cincinnati, Ohio. *Problem*: to organize a series of projects for the early grades of the Jewish religious school in customs and ceremonies. *Dates*: 1926-.

UNION THEOLOGICAL SEMINARY⁶

Elliott, Harrison S., and Fahs, Mrs. Sophia Lyon, Union Theological Seminary. *Problem*: experiments in children's worship services. *Dates*: 1924-29. *Finances*: Union Theological Seminary. *Methods*: experiments in worship services, recording of evidences of carry-over into other activities.

Elliott, Harrison S., and Fahs, Mrs. Sophia Lyon, Union Theological Seminary. *Problem*: facing life problems in Union School of Religion. *Dates*: 1923-28. *Finances*: Union Theological Seminary. *Methods*: detailed weekly teachers' reports and personality studies.

Hendry, Charles E., 99 Claremont Ave., N. Y. C. *Problem*: a critical evaluation of the Canadian Provincial Boys Parliament, with reference to its character-educational value. Thesis. *Dates*: 1927-29. *Finances*: National Boys Work Board and personal. *Methods*: descriptive, historical, attitude test, case studies.

LeSourd, Howard M. *Problem*: survey of the university pastor work of the United Lutheran Church at state and independent institutions. Ph. D. thesis. *Dates*: 1928. *Finances*: survey of the colleges of the United Lutheran Church of America. *Methods*: examination of historical data, questionnaire, test material, personal interviews, and investigations.

Mathias, W. D. *Problem*: a study of

the relationship between ideas of God and certain types of conduct among junior children in the fifth to eighth grades. Ph. D. thesis. *Dates*: 1927-28. *Methods*: idea of God test and Character Education Inquiry tests to be correlated.

Newcomb, T. M., 600 W. 122nd St., N. Y. C. *Problem*: to determine whether extroversion and introversion are more significant in problem than in non-problem boys, and if they have any relation to methods of treatment. Ph. D. thesis. *Dates*: 1927-29. *Methods*: treatment of cases, rating scales, case histories, use of control group.

Patterson, George Sutton. *Problem*: the relation to character of the ability of children in the fifth to eighth grades to foresee consequences. Ph. D. thesis. *Dates*: 1927-. *Method*: tests.

Woodward, Luther E., 1274 51st St., Brooklyn, N. Y. *Problem*: to discover what relations exist between certain childhood and adolescent experiences in everyday affairs and adult religious beliefs, attitudes and practices. Ph. D. thesis. *Dates*: 1927-28. *Methods*: questionnaire, rating sheet, correlations.

VASSAR COLLEGE

Blanton, Smiley, Vassar College. *Problem*: study of students' religious reactions. *Dates*: 1927-28. *Methods*: questionnaires and personal interviews.

YALE UNIVERSITY

Berry, James B. *Problem*: an interpretation of the temptations of Jesus. Ph. D. thesis.

Collins, Clifford W. *Problem*: history of religious education in the Universalist Church. M. A. thesis.

Dickinson, Alzina. *Problem*: a vocational guidance curriculum for adolescents in religious education. M. A. thesis.

Dressler, Arthur. *Problem*: Sunday observance as a factor of religious education. M. A. thesis.

Eo-Yang, Yu Ching. *Problem*: a possible program of religious education for

⁶ All Ph. D. theses are worked out in cooperation with Teachers College of Columbia University. See under Cornell University for an additional thesis.

the Evangelical Church in Hunan. M. A. thesis.

Fam, Yacoub. *Problem:* problems of character education among Egyptian boys. M. A. thesis.

Ford, J. Emerson. *Problem:* the work of Stephen Olin as a religious educator. Ph. D. thesis.

Jeffers, Elsie M. *Problem:* project lessons on the life of Paul. M. A. thesis.

Jones, Lorena B. *Problem:* the use of the dramatic method in character education. M. A. thesis.

Jones, Mary Alice. *Problem:* the part of children in the mediaeval religious drama. Ph. D. thesis.

Middleton, Warren C. *Problem:* the element of denunciation in the work of George Fox; a study in the psychology of religion. Ph. D. thesis.

Myers, Walter. *Problem:* Christ in the Levant: a study in the curriculum of religious education. M. A. thesis.

Scudder, Anna. *Problem:* the use of pictures in religious education. M. A. thesis.

Seamans, Herbert. *Problem:* the educational philosophy of the student Y. M. C. A. M. A. thesis.

Sherrill, L. J. *Problem:* parochial schools in the Old School Presbyterian church, 1846-70. Ph. D. thesis.

Smith, M. L. *Problem:* the religious educational work of Atticus G. Haygood. Ph. D. thesis.

Triplett, Louise. *Problem:* training the high school pupils in prayer. M. A. thesis.

Vieth, Paul. *Problem:* the determination of curriculum objectives in terms of character traits. Ph. D. thesis.

Vinie, Earl. *Problem:* the treatment of the principle of religious freedom in elementary and secondary textbooks in American history. Ph. D. thesis.

Ward, Mae Yoho. *Problem:* self-analysis as an educational means for character development. M. A. thesis.

Weber, William A. *Problem:* the problem of theological education in the Dutch Reformed Church. Ph. D. thesis.

Wilkerson, James. *Problem:* Richard Baxter as a religious educator. M. A. thesis.

Williams, Lillian. *Problem:* a critical study of method in a fourth grade class of a church school, based on stenographic reports. M. A. thesis.

Winfield, Oscar. *Problem:* moral education as conceived by Ellen Key. M. A. thesis.

Y. M. C. A. COLLEGE, CHICAGO

Dimock, Hedley S., Y. M. C. A. College, Chicago. *Problem:* a survey of the "character claims" of the Y. M. C. A. *Dates:* 1928. *Finances:* Laura Spelman Rockefeller Memorial. *Method:* examination of Association literature; employment of selected list of program activities and character values to be rated by Association leaders.

Dimock, Hedley S., Y. M. C. A. College, Chicago. *Problem:* analysis of changes in attitude and conduct which take place during adolescence and of the factors in the process which condition these changes. *Dates:* 1928-32. *Finances:* Laura Spelman Rockefeller Memorial. *Methods:* objective tests of attitudes and other aspects of character, life histories, case studies.

Kincheloe, S. C., Y. M. C. A. College, Chicago. *Problem:* the church in the changing community, a study of the development of the white American Protestant church through urban life. *Dates:* 1924-. *Finances:* Laura Spelman Rockefeller Memorial. *Methods:* spot maps, graphing, case studies.

Y. M. C. A. NATIONAL COUNCIL

Watson, Goodwin B., Biddle, D. K., and Brandenburg, E. W., Y. M. C. A. National Council, N. Y. C. *Problem:* what boys learn in summer camp. *Dates:* 1925-28. *Finances:* contribution to National Council. *Method:* tests and questionnaires.

Watson, Goodwin B., and Biddle, D. K., Y. M. C. A. National Council, N. Y. C. *Problem:* evaluation of worship for older boys. *Dates:* 1927-28. *Finances:*

National Council. *Method*: services rated and ranked by boys.

Watson, Goodwin B., Maxwell, G. L., and Swift, A. L. *Problem*: testing boys in Brooklyn Y. M. C. A. to discover status of Y. M. C. A. members in emotional adjustment, sex education, home status, Bible knowledge, ideas of God, ethical judgment, and truth telling. *Date*: 1928. *Finances*: Brooklyn Survey of Y. M. C. A. *Method*: tests.

Y. M. C. A. OF BROOKLYN AND
QUEENS, N. Y. C.

Swift, A. L., Union Theological Semi-

nary, and Maxwell, G. L., 26 Court Street, Brooklyn, N. Y. *Problem*: to discover ways and means of increasing efficiency of Brooklyn and Queens Y. M. C. A. *Dates*: 1927-28. *Finances*: contributions and Association. *Methods*: survey, questionnaires, interviews, case studies, opinion studies, observation.

Y. M. C. A., HYDE PARK, CHICAGO

Shaw, Claud L., 1400 E. 53rd St., Chicago. *Problem*: an experiment with staff worship programs. *Dates*: 1927-28. *Method*: rating of programs by participants.

BUSINESS SESSIONS OF THE PHILADELPHIA CONVENTION

The Association met in business session March 7, from 2:00 to 2:30 o'clock, and on March 8 at the same hour. The following items of business were transacted:

1. COMMITTEE ON REORGANIZATION

Dean R. A. Kent reported for the committee, recommending the following amendments to the by-laws of the Association:

Article III, Section 1, Paragraph 2: After the words "General Secretary" insert "the chairmen of the three standing committees provided in the by-laws."

Section 2: Omit the words "within the months of March and April."

Article V, Section 5, Board of Directors, to read as follows: The Board of Directors, elected by the Association, is responsible to the Association for the management and control of the Association. The Board shall: (1) provide for the safe keeping and expenditures of all funds of the Association; (2) carry into effect the policies determined by the Association; (3) appoint the members of the standing committees provided by the Association; (4) publish the report of the conventions, of departments, of special committees, and such other material as shall further the purposes of the

Association, in *Religious Education* or by other suitable means; (5) elect its own chairman.

Article VI, to read as follows:

Section 1, Standing Committees. For the maintenance and continuity of the work of the Association, and for the promotion of its work of investigation there shall be the following standing committees:

A. *Advisory*. The Advisory Committee shall prepare the programs of the Association, including convention plans, and control such other matters as may properly be referred to it by the Board of Directors.

B. *Editorial*. The Editorial Committee shall serve in an advisory capacity in connection with *Religious Education*, the journal of the Association.

C. *Research*. The Research Committee shall promote research in religious education and improve the methods and practices of the same.

Section 2. Further Committees. The Association in annual convention may provide for its own committees or may direct the Board to provide further standing committees, or the Board, ad interim, may appoint such other committees of the Association as it may deem best in

carrying out the policies determined by the Association.

The report was unanimously adopted. (The By-laws as revised are printed on pages 389-91).

2. NOMINATING COMMITTEE

Professor W. D. Schermerhorn presented the report of the committee, as follows: For President, Professor William Adams Brown of Union Theological Seminary; for Vice-President, Professor Adelaide T. Case of Columbia University; for Recording Secretary, Professor W. D. Schermerhorn of Garrett Biblical Institute.

For Directors: To membership on the Board of Directors for a three-year term expiring 1931, the following: Miss Margaret Burton, W. G. Watson, Mrs. R. B. Harbison, Herman Page, Lotus D. Coffman, Florence Allen, James S. Seneker, J. A. Stout, H. W. Hawkes, Louis L. Mann.

For a term of one year (to fill vacancy), Fred Kelly. For a term of two years (to fill vacancy), George G. Davis and Marcus Aaron. (See full list of officers and Board members on inside front cover of the Journal).

On motion, the secretary was instructed to cast the ballot for these nominees. The motion was unanimously carried.

On motion, the Board of Directors was authorized to appoint State Representatives.

3. NEXT CONVENTION

The place of the next meeting was discussed and the following motion was passed: "That the determination of the time and place of the next meeting of the Association be left to the Executive Committee of the Board of Directors, with the suggestion that if practical it be held concurrently with some other educational society."

4. REGIONAL MEETINGS

The following motion regarding regional meetings was passed. "That the Association look with favor upon re-

gional meetings to be held from time to time as the Executive Secretary and the Board of Directors jointly may determine and so far as in their judgment such meetings promise success."

5. RESEARCH COMMITTEE

Professor A. E. Holt, for the committee, made the following statement of policy:

(1) Research work of the Association should be done by encouraging projects already begun by university or other groups.

(2) The Religious Education Association can act as an agency for integrating various research projects now in process and to be undertaken by various groups.

(3) Occasionally the Religious Education Association could bring together for a week or more groups who are attempting common research work, and help to standardize and further their work.

(4) Reports of results achieved could then be shared with all in the annual meeting of the Religious Education Association.

6. EDITORIAL COMMITTEE

Dr. L. T. Hites, Editorial Secretary, reported the work of the Editorial Committee, of the Journal, and the monograph series.

7. RESOLUTIONS

The following resolution was adopted: "The Religious Education Association, assembled in its twenty-fifth annual session, wishes to express its deep and sincere appreciation for the hospitality extended it by the city of Philadelphia.

"Especially does it feel indebted, first, to the local committee on arrangements for the manner in which they have so carefully and thoroughly prepared in advance for every facility that would assist the Association to pursue the work of the convention with uninterrupted success. Second, it feels particularly under obligation to the Philadelphia Chamber of Commerce for the luncheon and the felicitations so graciously and generously given."

W. D. Schermerhorn, Secretary.

BY-LAWS OF THE RELIGIOUS EDUCATION ASSOCIATION*

ARTICLE I

NAME, PURPOSE, PLACE, ETC.

SECTION 1. *Name.* The name of the corporation shall be "The Religious Education Association."

SEC. 2. *Purpose.* The purpose of this Association shall be to promote religious and moral education.

SEC. 3. *Place.* The business of said corporation shall be located in Chicago, in the State of Illinois, and its business offices at such places in said city as its directors shall from time to time direct.

ARTICLE II

MEMBERSHIP, KINDS, ETC.

SECTION 1. *Membership.* The membership of the Association shall consist of all persons who upon application have been duly elected by the Board of Directors and have paid the annual fees as required by the By-Laws.

SEC. 2. *Kinds.* There shall be two classes of Members: Active and Life.

SEC. 3. *Active.* Active members shall be:

(1) Any persons engaged in, or interested in, the work of religious or moral education.

(2) Institutions and organizations thus engaged. Active members electing to pay annually from five to ten dollars shall be designated as "Active Contributing Members." Active members electing to pay annually from ten dollars upward shall be designated as "Active Sustaining Members."

SEC. 4. *Life.* Life members shall be any persons who have paid \$100.00 at any one time to the Association.

SEC. 5. *Duration of Membership.* A written application for active membership and its acceptance by the Board of Directors, shall constitute an agreement between the applicant and the corporation to continue such membership and pay an-

nual dues, unless written notice of discontinuance is sent to the General Secretary one month before the end of the year for which dues have been paid. Membership may be resumed on payment of the current fee.

SEC. 6. *Fees.* All fees shall become due annually at the date of joining the Association. All subscribers to the Journal, *Religious Education*, who meet the membership requirements as outlined, may be admitted as members without extra fee.

SEC. 7. *Voting.* Any active member of said corporation in good standing at the time of any annual or special meeting shall be entitled to one vote.

SEC. 8. *Election of Members.* The Board of Directors shall pass upon the applications for membership and have the right to accept or reject any and all applications.

SEC. 9. *Publications.* The annual subscription price of *Religious Education*, the Journal of the Association, shall be \$5.00.

ARTICLE III

MANAGEMENT AND CONTROL

SECTION 1. *Board of Directors.* The affairs of the corporation shall be managed and controlled by a Board of Directors who shall be elected by the active members of the corporation at the annual meeting of the members of the corporation.

The Board of Directors shall consist of the President, Vice-President, Treasurer, Recording Secretary, General Secretary, the chairmen of the three standing committees provided in Article VI of the By-Laws, and thirty members elected for periods as hereinafter provided.

In case of the thirty directors above, ten are to be elected to hold office for the period of one year, or until their successors are elected, ten for the period of two years, or until their successors are

*This printing includes revisions up to and including March 8, 1928.

elected, ten for the period of three years, or until their successors are elected, and thereafter, ten annually for the periods of three years.

SEC. 2. *Annual Meetings.* After the year 1923 there shall be held, at the time of the regular annual convention, an annual meeting of the corporation for the transaction of the business of the Association.

SEC. 3. *Special Meetings.* Special meetings of the corporation may be called by the Recording Secretary upon request of a majority of the Board of Directors, or upon written request to the Secretary by seventy-five members of the Association.

SEC. 4. *Qualification.* Any person a member of the Association may be elected a director. The vote shall be by ballot, and a majority of those voting shall be necessary for an election.

SEC. 5. *Vacancies.* Vacancies on the Board of Directors may be filled by the directors at a meeting regularly called or held.

SEC. 6. *Compensation.* No director shall receive a salary or compensation for services as a director.

SEC. 7. *Quorum.* Fifty members of the corporation present in person or by proxy shall constitute a quorum for the transaction of business at any regular meeting and seventy-five present in person for any special meeting of the Association.

ARTICLE IV

MEETINGS OF DIRECTORS, QUORUM, ETC.

SECTION 1. *Directors' Meetings.* The meetings of the Board of Directors shall convene at the call of the Chairman of the Board, or at the written request of seven members of the Board, as often as the business of the corporation may require, by mailing to each director, at least three days prior to the date of such meeting, a written or printed notice, stating the time and place of such meeting.

SEC. 2. *Quorum.* A quorum shall consist of five members of the Board of

Directors, but directors less than a quorum may adjourn the meeting to a future date.

ARTICLE V

OFFICERS, DUTIES, ETC.

SECTION 1. The officers of the Association shall be a President, Vice-President and one representative to be elected from the members in any State, Province, or Foreign Civil District, to be elected by the members of the Association at the regular business meeting, and a Recording Secretary, General Secretary and a Treasurer, to be elected by the Board of Directors at its first meeting, which officers shall hold their respective offices for a period of one year or until their successors are elected and qualified.

SEC. 2. *President.* The President shall preside at the meetings of the Association, and shall perform the duties usually devolving upon a presiding officer. In his absence the Vice-President shall preside, and in the absence of the Vice-President, a *pro tempore* Chairman shall be appointed on nomination, the Recording Secretary putting the question.

SEC. 3. *Recording Secretary.* The Recording Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and of all meetings of the Board of Directors.

SEC. 4. *Treasurer.* The Treasurer shall receive and hold, invest, or expend, under the direction of the Board of Directors, all money paid to the Association; shall keep an exact account of receipts and expenditures, with vouchers for the latter; and shall render the accounts for the fiscal year ending April 30th to the Board of Directors. He shall give such bond for the faithful discharge of his duties as may be required by the Board of Directors.

SEC. 5. *Board of Directors.* The Board of Directors, elected by the Association, is responsible to the Association for the management and control of the Association. The Board shall: (1) provide for the safe keeping and expenditure of all

funds of the Association; (2) carry into effect the policies determined by the Association; (3) appoint the members of the standing committees provided by the Association; (4) publish the report of the conventions, of departments, of special committees, and such other material as shall further the purposes of the Association, in *Religious Education* or by other suitable means; (5) elect its own chairman.

SEC. 6. *General Secretary.* The Board of Directors shall fix the salary of the General Secretary, and have the power to employ other necessary secretaries, and fix their compensation and their terms of office.

ARTICLE VI COMMITTEES

SECTION 1. *Standing Committees.* For the maintenance and continuity of the work of the Association, and for the promotion of its work of investigation, there shall be the following standing committees:

A. *Advisory.* The Advisory Committee shall prepare the programs of the Association, including convention plans, and control such other matters as may properly be referred to it by the Board of Directors.

B. *Editorial.* The Editorial Committee shall serve in an advisory capacity in connection with *Religious Education*, the journal of the Association.

C. *Research.* The Research Committee shall promote research in religious education and improve the methods and practices of the same.

SEC. 2. *Further Committees.* The Association in annual convention may provide for its own committees or may direct the Board to provide further standing committees, or the Board, *ad interim*, may appoint such other committees of the Association as it may deem best in carrying out the policies determined by the Association.

ARTICLE VII

GROUP ORGANIZATION IN THE WORK OF INVESTIGATION AND FOR THE PROMOTION

OF SPECIAL STUDIES AND CONFERENCES

The Association shall foster group organizations as follows:

SECTION 1. *Membership.* Any twenty or more members may, with the approval of the Board of Directors, organize a Group. The membership shall consist of members of the Association present and voting. Any group that fails to hold a meeting during the period of two full years shall be deemed to have disbanded.

SEC. 2. *Organization.* Each of the groups under the Association shall be organized with a Chairman, Vice-Chairman, a Recording Secretary and an Executive Secretary. The Chairman, the Secretary, and not less than three nor more than seven members of the group, shall constitute its executive committee. All of these shall be elected by ballot on a majority vote of the members present and voting at a meeting held at the time of the annual convention and they shall hold office for one year and until their successors are chosen. The action of the groups shall be recognized as the official action of the Association only when approved by the Board of Directors.

ARTICLE VIII

AMENDMENT, OR ALTERATION, OF BY-LAWS

SECTION 1. *Amendment.* These By-Laws may be modified, amended or altered at any annual meeting, or at any adjourned session of such annual meeting.

ARTICLE IX

RECOMMENDATIONS

SECTION 1. *Recommendations.* Recommendations concerning the policy of the organization, or officers to be elected, may be made to the members of the corporation or Board of Directors, by the members present at the Annual Convention, which recommendations shall be followed and adhered to as far as possible.

ARTICLE X

RULES

SECTION 1. *Rules.* Roberts "Rules of Order" shall be the rules used in the conduct of all meetings.

THE PROFESSIONAL GROUPS REORGANIZE

REPORT OF THE JOINT MEETING OF THE ASSOCIATION OF DIRECTORS AND MINISTERS OF RELIGIOUS EDUCATION AND THE ASSOCIATION OF WEEK-DAY WORKERS IN RELIGIOUS EDUCATION, MARCH 6, 1928*

ONE of the surest ways of starting an argument is by attempting to define philosophical terms. And yet one of the surest means of vitiating a discussion is by failing to have terms hold similar content for participants in the discussion. The Association of Directors and Ministers and the Association of Week-Day Workers hung between the horns of this dilemma at their joint annual meeting preliminary to the convention. An arbitrary statement of definitions by the chairman or any member of the group would have taken thinking far afield. And yet it was difficult to decide just what was included in the discussion of the questions raised by the program committee.

These questions were: First, where do questions involving the relations between science and religion arise in the minds of children and young people? Second, how do these questions resolve themselves? Third, what are churches, church schools and week-day schools doing and what may they do in a constructive way to supply cultural needs in this field or otherwise obviate these too frequent and often too serious conflicts?

It became apparent as the discussion moved forward that there were rather universal concepts for the terms 'religion' and 'science' in the thinking of those who contributed to the development of the theme. 'Religion' seemed to be used most often as meaning 'a philosophy of life.' 'Science' seemed to have two interpretations—a body of facts, and a method of seeking truth. It was obvious that the latter definition held more significance for the group.

The term 'questions' also carried with

it two connotations. In some cases it meant questions arising in the normal adjustment to life which postulates the formation of a philosophy of life with never ending readjustments. Such questionings as where is God? does God really care for us? has prayer any real efficacy? come in this classification. Inevitably such questions will arise throughout life.

The other meaning for the term 'questions' seemed to be synonymous with 'conflicts.' Such conflicts arise whenever dogmatic religion and dogmatic science appear to teach opposite points of view and demand either a choice between them or a reconciliation of the two points of view. This type of difficulty is most likely to trouble adolescents because they are first coming to a realization of the implications of religion and science. If, however, an individual has reached maturity without having been introduced to both points of view, it is quite possible that a still more serious conflict will arise.

The answer to the second question proposed by the program committee became so involved with that of the answer to the third question that both questions were considered together. However, it became apparent that such conflicts could be resolved in one of three ways. First, the individual might become completely alienated from either religion or science and cling desperately to the other as his chosen explanation of the universe. Second, he might accept the findings of science and make his religion a blind faith which would prevent its becoming a vital force in his every day life. This solution is often accompanied by unfortunate psychological effects. There is, of course, the third possibility that some one may come to his rescue and help him to see that both science and religion are in

*Prepared by a committee consisting of Frank W. Herriott, Harry H. Hubbell and Miriam Chalmers.

a process of growth and, from an undogmatic point of view, he may realize that science and religion not only harmonize but even strengthen each other.

In considering what the churches and church schools may do in a constructive program, several helpful methods were suggested, such as forums, selected curricula, pastoral conferences, parents' groups, teacher training classes, services of worship, discussion classes, and personal interviews. It became apparent that back of the use of each method were several underlying principles which religious educators must bear in mind if they are to succeed in the task of teaching a religion which is compatible with science.

The first of these is that we must have a purpose for our teaching rather definitely in mind. Many who are attempting to carry on this work have not decided just how far they want to accept the findings of science. They have no clear idea of just what conceptions they *do* want to impart. Since the method of religious education is very decidedly in the trial and error period, it makes the program most confusing if there is not some approximation to a purpose.

Another necessity is that we must have something positive in our teaching. Some have tried to correlate science and religion by another group of 'thou shalt not's'—thou shalt not believe in the first chapter of Genesis, thou shalt not believe in the virgin birth, thou shalt not believe other things along the same line. The positive truths of religion do not give rise to such conflicts.

Probably the most important principle underlying our teaching of religion in an age of science is that we must be willing to accept the truth wherever we find it—not only to accept it but actually to seek it. Nor can we allow ourselves to believe that we have the only complete revelation of the truth and that all who differ from us cannot possibly be right.

This last principle carries with it the

corollary that in all our work we must demand absolute intellectual honesty. The scientific method has always been that of scrapping whatever has been proven false. In religion when we do accept some new finding we are inclined to cling to our traditional beliefs and attempt to re-state them so they appear to be in keeping with the new. This produces confusion which is not necessary, and there is enough that seems to be necessary.

As the discussion progressed it became evident that there was a possibility of avoiding conflicts between science and religion and using educationally such questions as do arise in seeking for a philosophy of life. To make the thinking more concrete it was agreed that several people who had worked along this line should share with the group their practical experience.

Mrs. Fahs, principal of the Union School of Religion, gave several examples of the results they had obtained by having the teachers join with the children in a searching, wistful attitude toward God. A frank admission of the fact that we do not know, any more than the child, exactly what is true will prevent the psychological difficulties which may arise when the child finds himself forced to choose between the dogmatic religion taught him by one he loves and the facts of science which appeal to his intelligence.

Arthur Moore, National Council of the Y. M. C. A., Student Division, pointed out that in working with college men it was possible to harmonize science and religion by considering both from a viewpoint of purpose:—where we are going to, rather than where we had come from. In considering the problem of the future it is impossible to do away with either science or religion. Thus we may have a unifying purpose which motivates us in our endeavors to find the harmony between science and religion.

Frank Butler, director at the First Congregational Church of Providence,

Rhode Island, told of the plan whereby he makes his pupils aware of the possibility of different concepts, all of which may contribute to the common good. His teachers are not asked to conform to a certain theology. They may—indeed, they are urged—to teach whatever they honestly believe. But they must make it clear to their pupils that it is *their* belief and not *the* belief. Others may differ as to what they believe and each must find out for himself what is satisfactory to him. Such training to make inquiring minds will do much to insure the children against future conflicts.

REORGANIZATION

At the business meetings of the Association of Directors and Ministers of Religious Education and the Association of Week-Day Workers in Religious Education it was voted to amalgamate using the following constitution.

PREAMBLE

Since the International Council of Religious Education provides for the professional interests of specialists in religious education in its scheme of professional advisory sections, and that there be no semblance of overlapping; and also because the members of the Association of Directors and Ministers of Religious Education and the Association of Week-Day Workers in Religious Education agree that they, together with pastors, face a common task in the creation and maintenance of an adequate program of religious education in local fields, e. g., in church, week-day, and vacation schools, it is therefore advisable to discontinue both the former organizations affiliated with the Religious Education Association and to establish a new one more favorable to this end in view.

CONSTITUTION

1. *Name.* The name of this organization shall be THE ASSOCIATION OF PRO-

FESSIONAL EDUCATORS IN LOCAL CHURCH FIELDS.

2. *Object.* To band together all persons professionally related to the problem of religious education in the local fields;

To provide a creative critique of the theory and practice of these people in securing of their desired goals;

To accomplish this by fellowship, study, research, corporate thinking, and the dissemination of common knowledge by conventions and publicity.

3. *Membership.* All persons professionally engaged as administrators or teachers of religion in local fields are eligible to membership.

4. *Officers.* The officers of the Association shall be: a President, two Vice-Presidents, and a Secretary-Treasurer, with such duties as usually pertain to these offices.

The officers shall be elected at the annual meeting of the Association to be held in connection with the regular convention of the Religious Education Association, to serve one year, or until their successors shall have been elected.

5. *Dues.* The dues of the Association shall be \$1.00 per year, payable in advance.

6. *Amendments.* Amendments to this constitution may be made by a two-thirds vote of those present at any business meeting, provided notice of such proposed amendment shall have been given to each member in writing at least one month prior to such action.

While the clause on membership was accepted as it now stands, there was rather widespread agreement that some restriction should be placed upon entrance to insure some special training or experience in the work. Many felt that the group should adhere to the old membership requirements, while others felt that they were too rigid, although

there should be some limitation. The executive committee will be expected to work out further details of this and other points of the amalgamation. All former members of the two original organizations automatically become members of the new one.

The officers elected for the ensuing year are:

President John R. Lyons
Vice-President ... Miss Blanche Carrier
Vice-President Frank Butler
Secretary-Treasurer
..... Mrs. Grace E. Mayer-Oakes

COE'S CRITICISM OF THE WRESTLE OF RELIGION

I AM deeply grateful for the support which comes from having the great name of Coe attached to a review of my book. Not only his commendation but his criticisms are most helpful. There is a penetrating analysis in his thinking which searches out the articulations of the work he is examining and sets forth certain portions in clear distinction. The adverse portions of his criticism come under three heads: (1) the seemingly non-social character of worship as described by me, (2) my definition of the God-concept, (3) my valuation of mysticism. I feel that I can clarify my position on these three points and am eager to do so on these pages, since Professor Coe's masterful analysis was given to the readers of this Journal. Also I believe clarification of these three issues may have marked value for students of religious education.

SOLITARY WORSHIP

I feel that solitary worship is no more unusual than the solitary investigations of a scientist shut in his laboratory searching for some means of curing cancer or tuberculosis, or increasing the quantity, quality and cheapness of food for human kind. The fact that a man has freed himself from all the distractions arising out of the physical contiguity of fellowmen in order to concentrate his powers more effectively upon producing something of great social value, gives to his isolation profound social significance. Under such conditions, a man's temporary solitude may have social results far more beneficial and extensive than anything which might ensue from face to face intercourse with a group. Of course, if one never had any face to face intercourse with a group, he never could make much out of his solitude.

But the reverse is also true. If one never labors in solitude as every great painter must do, or poet, or physicist, or inventor, or mother meditating to promote a child's welfare, or a young man seeking how he shall conduct his life (spending, it may be, forty days and nights in the wilderness), if one never makes use of solitude to organize the experiences gained in social contacts, he can never contribute anything of great value in his face to face intercourse. A mother in isolation "pondering many things in her heart" is more "social" than a mother who is always conversing

with somebody. The most social religion is not the religion of people who are most uninterruptedly engaged in face to face interchange of ideas and emotions. Such constant intercourse makes people superficial, destroys originality, and hence removes the power to reconstruct society after a better pattern.

We maintain that solitude has all the values for worship that solitude has for any kind of problem solving. Discussion is indispensable to profound and effective problem-solving; but so also is solitary meditation. Both are needed; they supplement one another. So also both kinds of worship are needed. But the kind of worship most neglected, and the kind which people seem least capable of conducting in a helpful way, is solitary worship. Therefore I felt there was greatest need for discussion of it. Therefore I gave my attention to it in the book. I have since made a study of public worship.*

Professor Coe claims that the worship I describe and advocate is non-social because it gives the individual "mastery over his worries and his fears, poise, concentration, self-confidence and the like." Does he mean to say that worries, fears, poise, concentration, self-confidence are not social? "The habits that need reviewing and reconstructing," he says, "are largely non-solitary. . . . They are the customs, standards, attitudes, and presuppositions of families, social sets, firms and corporations, occupational groups, churches and denominations. . . ." But what are these customs, standards, attitudes and presuppositions which have nothing to do with worries, fears, poise, concentration, self confidence of individuals? I cannot find them. I cannot understand his use of the word social. Does he mean that there are customs, standards, attitudes of groups which are not the customs, standards, attitudes of individuals? Then of what are these groups composed? Or does he mean that these customs and attitudes do not involve the worries, fears, poise and self confidence of individuals? Worries, fears, poise, self confidence arise out of the relation of individuals to one another. They are social.

The habits which I describe as being reviewed and reconstructed in solitary worship

*"Beauty in God and Public Worship," *The Methodist Quarterly Review*, April, 1928.

are precisely the social habits which Coe designates under the terms of customs, standards, attitudes, etc. In fact, human beings do not have any other kind of habits save those which condition, and are conditioned by, association, and therefore are social. The fact that they are reviewed in solitude does not mean that the habits themselves are solitary. Why, then, seek solitude to review them? For the same reason that the painter, the inventor, the physicist, Jesus in the wilderness, seek solitude to survey and plan their course of conduct. Of course, one can never reconstruct his habits in better adaptation to the needs of the group if he spends all his time in solitude. But occasional seasons of solitude are necessary.

The basic fallacy of Professor Coe seems to be the very simple one of thinking that because the survey of the habits is solitary that therefore the habits themselves must also be solitary. It is the same fallacy that would be made if one said that, because a solitary man in an aeroplane surveyed individuals in a crowd beneath him, those individuals were also solitary. Thinking in solitude does not make the things thought about solitary.

THE DEFINITION OF GOD

Professor Coe declares that with my concept of God I get myself into "the insoluble difficulties that absolute idealism encountered in its struggle to construe the concrete world by means of a purely abstract first principle."

I give many pages of my book to a discussion of the nature of concepts precisely to prove that I do not use the concept of God to "construe the concrete world." On the contrary, I reiterate again and again that a concept taken by itself alone and apart from its proper use, does not give one any knowledge of the concrete world whatsoever. It is merely a tool. But it is an indispensable tool for those experimental operations through which alone knowledge of the concrete world is achieved.

Some may forthwith reply to the statement I have just made by claiming that if such be the nature of the concept how can it be said that my definition of God renders his existence certain? For the same reason that any tool which is *used* proves the existence of that upon which it is used.* I have formulated the concept of God in such a way that men cannot avoid using it when they live humanly, i. e., aspiringly. Since men do live humanly, this tool is used. Therefore it proves the existence of that upon which it must be used. In other words, men constantly do make adjustments to environment which yield a better life than other adjustments and they do so intelligently, i. e., with the use of concepts, thereby proving that there is some behavior of the environment which lifts life to higher levels when right adjustments are made. One cannot even make an intelligent effort to achieve the best life with-

out using the concept by which I define God.

This formulation of the God-concept, then, does four things: (1) It reveals that God certainly exists, as any used tool reveals the existence of that upon which it is used. (2) It avoids that morass and confusion into which we fall whenever we try "to construe the concrete world by means of a purely abstract first principle." (3) It provides a concept of vital and practical value which men cannot neglect if they are to live like humans, aspiringly. (4) It forces the religious person to seek God in the concrete experiences of experimental living; for this concept, when taken by itself alone, is barren and empty and does not even yield the emotional glow of a religious symbol.

I find a strange self contradiction in Professor Coe's further criticism of this "definition of God." On the one hand he criticizes it because, according to it, God is "utterly characterless." It does not give the pupil a religious idea of God at all. But then he goes on to suggest that the right method of religious education is to induce pupils "to learn about, observe, interpret, control and reconstruct experience." The wrong method is to give pupils a ready made idea of what God must be before they have developed that idea out of their own experience.

Is there not a flagrant contradiction here? On the one hand he objects to my definition because it does not give the pupil a religious idea of God. Then he says that in right methods of religious education one must not give the pupil an idea of God but must induce him to get such an idea through his own controlled experience. But my definition is precisely designed to do that very thing. It is "utterly characterless" so far as religious content is concerned. It is merely a tool. But it is a tool which is indispensable to observing, interpreting, controlling, and reconstructing experience religiously.

There is only one possible way for Professor Coe to escape this self destroying contradiction in his argument, and that is for him to take the position that it is possible for a pupil or anyone else to observe, interpret, control, and reconstruct experience *without the use of any concept whatsoever*. But surely Professor Coe would not fall into an error so universally recognized as that.

Professor Coe objects to my statement that "by definition" God is that "which would and does bring human life to largest fulfillment when proper adjustment is made to it." He points out that we cannot say God does anything merely as the result of defining him. But in such an interpretation of my words he has misunderstood my meaning. I am simply indicating that this concept is to be used as a tool and what it is to be used for. A razor does not by definition shave the face, but a razor is, by definition, that which would and does produce a shaven face when one makes right adjustment to it. The presence of razors

*See *The Metaphysics of Pragmatism*, by Sidney Hook.

will not help a man shave his face unless he has such a concept to guide him in their use. But if men do have such a concept, and by its guidance succeed in getting their faces shaved, we can be very sure that it is not the mere concept that does the shaving. We can be very sure that there is something else involved besides the concept, namely, the actual existence of razors. As the concept of a razor, with the observed consequences of its use, proves the actual existence of razors even though a person may never have seen a razor with his own eyes, so my concept of God reveals the certain existence of God. Thus it serves to guide the pupil in developing an idea of God out of his own experience as I, with the concept of razor in my mind and a beard on my face, may be led to discover in my own experience the existence and value of the razor. But if I never have such a concept to guide me I might never discover the existence and value of the razor even though numerous razors lay in plain view about the house. So it is with God and the concept of God as I have formulated it.

THE VALUATION OF MYSTICISM

Professor Coe has spent a long life fighting the evils found in mysticism, and there are certainly many to be found there. Students of the subject in all the English speaking world know of his valiant service. It is quite natural, therefore, when he finds me prizing mysticism, that he should think I am upholding what he has been fighting. But I do not think such is the case. Mysticism is a word of many meanings. What he condemns, if I understand him aright, I also would condemn. But I believe he has mistaken what I am trying to uphold under the head of mysticism. There is an experience having very great value which I have called mystical. Some may say that the experience I am considering is not what they understand by mysticism. I am not at all concerned with titles; I only want to evaluate the experience, regardless of what name one may choose to call it.

The experience is simply one in which established habits are disintegrated, but not with the torpor of sleep nor any other form of unconsciousness. Does disintegration of habits have any value as a transitional stage in the reconstruction of habits? Our answer is, under favorable conditions, yes. We do not see how one can answer otherwise. The question and answer just stated constitute our whole defense of mysticism. We do not defend mysticism on any other grounds than this. How can one's whole system of habits undergo radical and swift reorganization without a transitional stage of disorganization? The mystical experience, as we use the term, is simply this transitional stage of disorganization.

Professor Coe refers to this experience by the name of "ecstasy." But we explicitly state that the experience we are considering is not

necessarily ecstatic. Also in setting forth the distinguishing characteristic of the experience we omit ecstasy (page 154). Sometimes ecstasy occurs and sometimes it does not. When it does, the sole value we give to it is that it may incite to experimental reorganization of habits (page 156). But often the ecstasy works in just the opposite direction; it prevents the individual from making experimental reorganization of habit. When this occurs, the ecstasy becomes a positive evil, as we are careful to point out (page 158).

We are also very careful to state that this mystic experience is by no means the only kind of religious experience (page 153). Therefore Professor Coe's objection that religious experience, as we view it, would "seem to exclude all children, many adolescents, and many adults," does not apply, for our view is not limited to this type alone. Surely no one will deny that religious experience does sometimes assume this form, whatever other forms it may also assume. If that is granted, our whole claim for mysticism as religious experience is granted.

But when we understand that the only kind of mystical experience having positive religious value is that disorganization of habits which occurs as a transitional stage in the process of any swift and radical reorganization, can we say that all children, many adolescents, and many adults are incapable of it? Surely not all children; and with respect to adolescents and adults the "many" should be reduced to "some." It may be that some adolescents and some adults are incapable of that reorganization of habits which is so swift and radical as to require a transitional stage of disorganization. But I believe plasticity is such a common trait of human nature that most people under proper conditions are capable of such an experience. Certainly we cannot close the issue by dogmatic denial.

Professor Coe's quotation from my book to the effect that in mysticism we have an experience of "that ultimate source of all worlds that ever may be brought forth into existence by all the different possible ways of organic reaction to diverse stimuli," has the foolish sound that many statements have apart from their context. The statement simply means this: Our habits constitute one condition determining the kind of world we live in. When our habits are disintegrated that condition is removed. In so far as disintegration of all habits is a state out of which any kind of habits might emerge, it is a state out of which any kind of world might arise in so far as the emergence of any kind of world is dependent upon a certain system of habits.

When mysticism is understood and evaluated as a disintegration of habits serving as a transitional stage in the process of their reorganization, I think it becomes apparent that this experience may be a very valuable factor in worship. There is a state, whether or not

we call it mysticism, in which one becomes aware of experience so rich or so novel that he is not yet able to organize it. If he responds to it at all it must be a disorganized response. Indeed, to be aware of it at all means to respond to it in some fashion. Hence, to be aware of it means to suffer disintegration of habits and disorganization of response. The only other alternative is to be wholly unaware and insensitive to it. We claim that such an experience of sensitivity and disorganization is a necessary stage in the development of a more inclusive organization of experience. It is one of the most important forms of religious experience. It is what we mean to indicate by the word mysticism. It is a part of that radical readjustment of habits, to the end of a more inclusive or more adequate organization of experience, which profound worship seeks to achieve.—*Henry Nelson Wieman, The University of Chicago.*

COMMENT BY PROFESSOR COE:

Dr. Wieman's article not only throws light upon his books; it also points out three principles that are extremely significant for religious education, namely: (a) The necessity of solitary worship, and its possible service to social ends. (b) The use of religious concepts as stimuli and tools for experimenting, as distinguished from using them as ready-made truths to be applied to conduct. (c) The value of a state of mind in which habits are disorganized—its value as a transition-point in a movement into better habits.

Each of these principles has immediate application in the teaching of religion, and each of them is unrecognized or neglected. I am so heartily in agreement with what seems to be Wieman's main trend, as it is here explained, that I am anxious to prevent the remaining questions from obscuring this fact.

He agrees, I take it, that a person is not a mere individual, but that persons are conjunct; that solitary worship that fails to recognize this conjunctness tends towards self involution even though it removes the worshipper's worry, fear, etc.; that solitary worship can and should be social in the double sense that the worshipper then and there imaginatively associates with his fellows and likewise seeks their good along with his own. In addition, I should emphasize the need of a worship-relationship with my fellows in the concrete, not merely in imagination.

Since Wieman conceives the function of worship as a habit-reconstruction, corporate worship is essential with respect to activities that are strictly corporate—that is, not an aggregate of acts each of which could be performed in isolation, but acts in which "togetherness" is of the essence. With respect to them both private and communal worship is in order. If I am a member of a church board or council, a business corporation, a college fraternity, a labor union, an employers' association, or a

family, my private reflection and prayer can modify my action therein, and this action of mine can have a reconstructive influence, but it has this influence only as it stimulates a change in the give-and-take of thinking and valuing *together*.

Unfortunately, the churches have scarcely begun to think of corporate conduct in religious terms; hence the extreme need of congregational worship conducted from Wieman's standpoint. Think of this: We have no technique for corporate repentance (few specimens, in fact), and next to none for applying ethical tests to corporate conduct. How, for instance, does, or can, a church repent its organic neglect of major issues of the Kingdom of God?

This is the sort of consideration that my too-brief paragraph failed to convey to Dr. Wieman's mind. I fancy that he and I completely agree, and that the difference is merely that he stresses one neglected practise while I stress another. Of course he doesn't really believe that I committed the "very simple fallacy" that he blows away with a single breath.

Concerning the relation of religious concepts to religious living, again I fancy that we agree. The teacher's already-formed notions are to be used so as to stimulate pupils to the kind of experimental living out of which notions of their own shall freely grow. The more definite the teacher's concepts the better. But, surely, live concepts, whether of teacher or of pupil, grow up within experience instead of antedating it. Of course this does not mean that they are unimportant. Definite reflective thinking, as I have for many years insisted, should replace sentimentalizing in our plans for character-education.

The remaining questions concerning religious concepts touch upon what we shall mean by "God," and the nature of the evidence that God exists. I refuse to call divine any cosmic power that does not value persons; the connotation of the term is definitely ethical. But I understand Wieman to extend the connotation to a cosmic power the mark of which is our dependence, not its own ethical quality. Certainly his definition of "God" would apply to a universe in which our experience convinces us that life is not worth living. On the other hand—and this is more important—the God in whose real existence Wieman is so concerned is a being who makes possible a life that, in fact, is worth living. What sort of evidence, then, could point to the existence of *such* a being? I should say, the actual presence and power of goodness in our world—Jesus, and Jesus-like men, for example—particularly the fact of ethical creativeness residing in us, our capacity for *making* good what without our free action would not be good.

At this point my thought comes so close to that of Dr. Wieman when he talks of experimentation in the spiritual life that I wish I

could be certain that he has not inadvertently equated conceptual or logical possibility with actual possibility. The concept of God, he says, is a mere tool (conceptual possibility), but the existence of a tool actually at work proves the existence of that upon which it works (actual possibility of conceived changes.) A carpenter's plane taken abstractly, let us say, is to be construed as the conceptual possibility of changing a rough board to a smooth one; but the carpenter's plane in action—so the argument runs—proves that a rough board actually can be made smooth. But is it the plane, even in action, that proves this? Is it not inspection of the board before and after? Wieman's argument changes for the better, in fact, as it proceeds. First he claims that the existence of a conceptual tool at work proves the existence of that on which it works; later he remarks that "the observed consequences" of acting upon the idea of razor proves the existence of razors "even though a person may never have seen a razor with his own eyes." Agreed! As the change of a face from bearded to smooth is evidence of a real razor, so the movements of human life towards righteousness are the index-finger that points God-ward.

What Wieman says about turning-points in habit-reconstruction strikes me as essentially true and most suggestive for method in character-education. There is a relation, certainly, between these periods of relative emptiness and the mystical experience. As I shall say in a forthcoming publication, "In the mystical experience one goes to the edge of what one has been and what one is, looks over the edge, and says, 'There, in what never yet has been actualized or expressed, I discern both God and myself, and I discern the two at one and the same point.' This assertion that the same 'I' has been, is, and yet is beyond all that has been and is, has valid meaning as the self-affirmation of a being who resides in time and yet participates in determining the contents of time. But when the mystical experience abstracts itself from time, indulging an enjoyment of 'being' that is not also enjoyment of 'becoming,' it becomes an illusory self-involvement. It fancies itself to be union with the creative God without participating with him in the enjoyment of action and of change." It is true, as Wieman says, that *one factor* of mysticism—divesting oneself of one's past and present, and poisoning oneself over a void—is present in the most unmystical problem-solving; but everything depends upon how we take this void. For example, convinced that our traditional views of marriage and the family are not working well, and dubious about the various plans for reconstruction, my thought-habits on this subject are disorganized; my mind is poised, unable to choose; the world to this extent has slipped from me, and I am in a kind of abyss; yet, *I am studying the matter*, expecting to re-find my world and to have a mind of my own with respect to it.

This meets all the conditions of reconstruction that Wieman names, but it is at the antipodes of mysticism in any recognized sense.

Wieman has made a real contribution in his exposition of transition points. This is the main thing, beside which it is not very important to determine exactly what his book says about mysticism. Yet it is appropriate to remark, though I put no great stress upon it, that the book does designate these transition-points in religion, at least the more important ones, as "an ecstatic and stimulating experience" (156), and twice as an "immediate and ecstatic experience" (157, 158); it is the kind of experience that the Yogi practise and some drugs induce (153); in this state nothing is perceived or cognized (154, 158); but the mystic experience as thus defined is a necessary prerequisite to the most radical kind of experimentation (158); it provides "the necessary conditions" for "that experimental conduct of life by which the supreme good may be attained" (158); in its extreme form it is rare, but "we believe, however, it is a matter of degree and that many people may approximate it more or less remotely" (154). I welcome Dr. Wieman's re-statement of the point, which has the effect of a revision, and I wish that all teachers of religion might have the benefit of it.

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